Scout Report sent out 

Noted in the NID File 

Location map pinned 

Approval or Disapproval Letter 

Date Completed, P. & A. or
operations suspended ----------

Pin changed on location map 

Affidavit and Record of A & P 

Water Shut-Off Test 

Gas-Oil Ratio Test 

Well Log Filed 

Lease Nav.
7-31-9

FILE NOTATIONS

Entered in N I D File	X	Checked by Chief	X
Entered On S R Sheet	X	Copy N I D to Field Office	X
Location Map Pinned	X	Approval Letter	X
Card Indexed	X	Disapproval Letter	
I W R for State or Fee Land			

COMPLETION DATA:

Date Well Completed 7-2-58 — Location Inspected ______

OW X WW ______ TA ______ — Bond released

GW ______ OS ______ PA ______ — State of Fee Land ______

LOGS FILED

Driller's Log 7-28-58

Electric Logs (No.) 4

E X I ______ E-I X GR ______ GR-N X Micro X

Lat ______ Mi-L ______ Sonic ______ Others ______

UTAH OIL AND GAS CONSERVATION COMMISSION

WELL LOG 1 ELECTRIC LOGS 4 FILE X NO FILE

REMARKS: *Driller's Report

DATE FILED 6- 2-58 Nav-14-20-603

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. INDIAN 247 (Nav Tr 2)

DRILLING APPROVED: 6- 2-58

SPUDDED IN: 5-30-58

COMPLETED: 7- 2-58

INITIAL PRODUCTION: 982 BOPD, 9 BW *442 MCFGD

GRAVITY A. P. I. 41°

GOR: 450:1

PRODUCING ZONES: 5371-5524'

TOTAL DEPTH: 5524'

WELL ELEVATION: 4548 Gr; 4564 KB 040727

DATE ABANDONED:

FIELD OR DISTRICT: ~~Ratherford~~ Aneth

COUNTY: San Juan

WELL NO. RATHERFORD 42-14 (RATHERFORD 14-42) API 43-037-15860

LOCATION: 1976.6 FT. FROM (N) ~~(S)~~ LINE, 653 FT. FROM (E) ~~(W)~~ LINE. SE NE ¼-¼ SEC. 14

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
41 S	23 E	14	PHILLIPS ~~SHELL OIL COMPANY~~				

GEOLOGIC TOPS:

QUATERNARY	Star Point	Sinbad	Brazer
Recent	Wahweap	PERMIAN	Pilot shale
Alluvium	Masuk	Kaibab	Madison
Lake beds	Colorado	Coconino	Leadville
Pleistocene	Mancos	Cutler 2273'	Redwall
Lake beds	Upper	Hoskinnini	DEVONIAN
TERTIARY	Middle	DeChelly	Upper
Pliocene	Lower	White Rim	Middle
Humboldt	Emery	Organ Rock	Lower
Salt Lake	Blue Gate	Cedar Mesa	Ouray
Miocene	Ferron	Halgaite tongue	Elbert
Bishop conglomerate	Frontier	Phosphoris	Guilmette
Oligocene	Dakota	Park City	Simonson dolomite
Norwood	Burro Canyon	Rico (Goodridge)	Sevy dolomite
Eocene	Cedar Mountain	Supai	North Point
Duchesne River	Buckhorn	Bird Springs	SILURIAN
Uinta	JURASSIC	CARBONIFEROUS	Laketown dolomite
Bridger	Morrison	Pennsylvanian	ORDOVICIAN
Green River	Salt Wash	Oquirrh	Eureka quartzite
Upper	San Rafeal Gr.	Weber	Pogonip limestone
Middle	Summerville	Morgan	CAMBRIAN
Lower	Bluff sandstone	Hermosa	Lynch
Wasatch	Curtis	Upper 4271'	Bowman
Colton	Entrade	Lower	Tapeats
Flagstaff	Moab tongue	Molas	Ophir
Almy	Carmel	Paradox 5352'	Tintic
Paleocene	Glen Canyon Gr.	A	PRE-CAMBRIAN
Current Creek	Navajo	B	
North Horn	Kayento	C	
CRETACEOUS	Wingate	Manning Canyon	
Montana	TRIASSIC	Mississippian	
Mesaverde	Chinle	Chainman shale	
Price River	Shinarump 2037'	Humbug	
Blackhawk	Moenkapi 2140'	Joana limestone	

Form 9-331 b
(April 1952)

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal Lands

Lease No. 14-20-603-847

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	X	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

May 29, 19 58

North Desert Creek
Well No. 42-14 is located 1976.6 ft. from {N/S} line and 653 ft. from {E/W} line of sec. 14

NE 14 (¼ Sec. and Sec. No.) | 41S (Twp.) | 24E (Range) | SLBM (Meridian)

Rutherford (Field) | San Juan (County or Subdivision) | Utah (State or Territory)

The elevation [illegible] is 4948 ft. (Approx. Ground)

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Proposed Work:
1. Drill 12-1/4" hole to 1300'±.
2. Cement 8-5/8" casing at 1300'± with 700 sacks treated cement.
3. Drill 7-7/8" hole to 5340'±. Run Electrical Survey and Gamma Ray Neutron.
4. Cement 5-1/2" casing at 5340'± with 200 sacks regular cement.
5. Clean out to 5340'±.
6. Drill 4-3/4" hole to 5900'± . (T.D. - Paradox)
7. Run formation packer, wash formation with 500 gal. mud acid. Acidize lower zone with 1000 gal. regular and 1000 gal. retarded acid, then acidize upper zone with 1000 gal. regular and 3000 gal. retarded acid.
8. Swab well into production and establish rate.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company

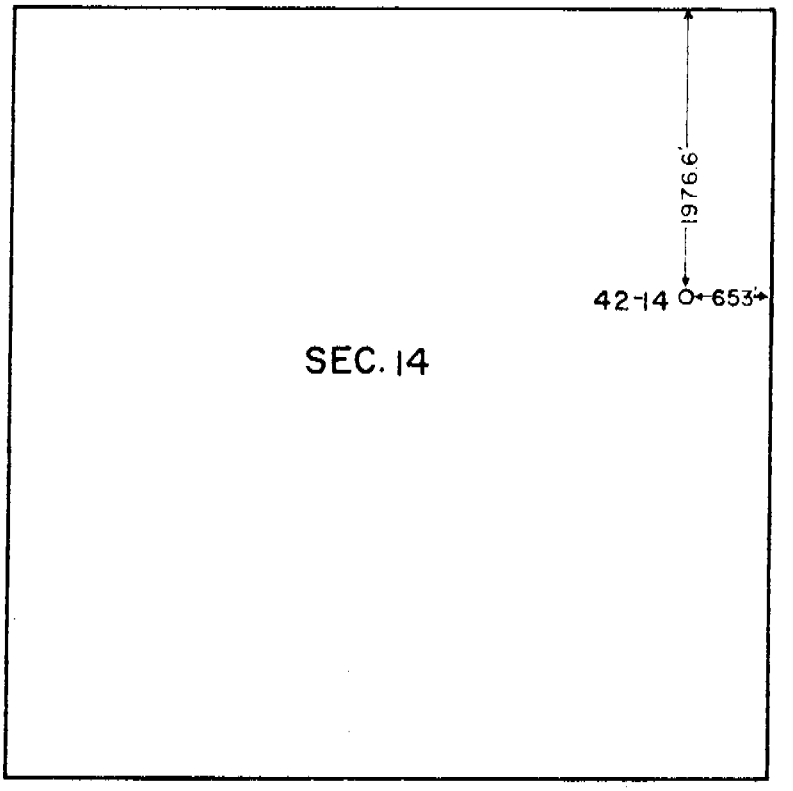
Address 101 South Behrend Avenue

Farmington, New Mexico

By for B. W. Shepard
Title Exploitation Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—8437b-8

R 23 E S.L.B.M.



1" x 2" R.P set 212.13' N45°W, N45°E, S45°W and S45°E from location.
1" x 2" hub set at location 1976.6 South of North line and 653' West of East line Sec 14, T41S, R23E, S.L.B.M.
TBM 1" x 2" hub S45°W 212.13' Elev. 4550.45
Location Elev. ungraded ground 4548

This is to certify that the above plat was plotted from field notes of a survey made under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Registered Land Surveyor
Certificate No. [illegible]

DRAWN BY	SHELL OIL COMPANY	DATE
TRACED BY		SCALE
CHECKED BY		FILE NO. Z-

LOCATION OF NORTH DESERT CREEK 42-14
SEC 14, TRACT 78, T41S, R23E, S.L.B.M., San Juan Co. Utah

June 2, 1958

Shell Oil Company
101 South Behrend
Farmington, New Mexico

Attention: B. W. Shepard, Exploitation Engineer

Gentlemen:

This is to acknowledge receipt of your notice of intention to drill Well No. Rutherford (North Desert Creek) 42-14, which is to be located 1976.6 feet from the north line and 653 feet from the east line of Section 14, Township 41 South, Range 24 East, SLBM, San Juan County, Utah.

Please be advised that insofar as this office is concerned, approval to drill said well is hereby granted.

This approval terminates within 90 days if the above mentioned well is not spudded in within said period.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
SECRETARY

CBF:cn

cc: Phil McGrath
USGS, Farmington,
New Mexico

Form 9-331 b
(April 1952)

[redacted]

(SUBMIT IN TRIPLICATE)

[redacted]

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

Indian Agency Navajo

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal Lands

Lease No. 14-20-603-247

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	X
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

June 4, 19 58

North Desert Creek
Well No. 42-14 is located 1976.6 ft. from {N} line and 653 ft. from {E} line of sec. 14

NE 14 (¼ Sec. and Sec. No.) | 41S (Twp.) | 23E (Range) | SLBM (Meridian)

Rutherford (Field) | San Juan (County or Subdivision) | Utah (State or Territory)

The elevation [redacted] is 4548 ft. (Approx. Ground)

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

(Spudded 5-30-58)

6-2, 3-58 Cemented 8 5/8" 28#, J-55 casing at 1277' with 450 sacks treated cement around shoe and 320 sacks treated cement through DV collar at 400'. Good returns to surface. Flanged up and waited on cement. Tested BOP & casing with 700 Psi 15 min., OK.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company

Address 101 South Behrend

Farmington, New Mexico

Original signed by
B. W. SHEPARD

By B. W. Shepard

Title Exploitation Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—8437b-8

June 9, 1958

Shell Oil Company
101 South Behrend
Farmington, New Mexico

Attention: B. W. Shepard, Exploitation Engineer

Re: Well No. Rutherford (North Desert Creek) 42-14, in Sec. 14, T. 41 S, R. 24 E, SLBM, San Juan County, Utah

Gentlemen:

Subsequent to our receiving your notice of intention to drill the above mentioned well and our letter of approval dated June 2, 1958, there have been many inquiries regarding the above location.

Your notice of intention dated May 29, 1958, states that the well is in Section 14, of Township 41 South, Range 24 East, while the accompanying plat plots the well in Section 14, of Township 41 South, Range 23 East, SLBM.

Will you please advise this office of the correct location.

Thank you very much.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
SECRETARY

CBF:en

19

SHELL OIL COMPANY

101 South Behrend Avenue
Farmington, New Mexico

June 12, 1958

State of Utah
Oil and Gas Conservation Commission
Salt Lake City, 14, Utah

Attention Mr. Cleon B. Feight

Gentlemen:

In reference to your letter of June 9, 1958; Ratherford (North Desert Creek) 42-14, the correct location is in Section 14, Township 41 South, Range 23 East, S.L.B.M., San Juan County, Utah, as stated on Engineer's Plat. The correction from Range 24 East to 23 East should have been made in ink on the Intention to Drill sent you dated May 29, 1958.

If there is anything further I can do for you, do not hesitate to call upon me.

Very truly yours,

B W Shepard

B. W. Shepard
Exploitation Engineer

9

PD 4A 2:58 PRINTER IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING 6-24-58

North Desert Creek
WELL NO. 42-14

Ratherford
(FIELD)

San Juan, Utah
(COUNTY)

14
(SECTION OR LEASE)

T41S, R23E
(TOWNSHIP OR RANGE)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
			Location: 1976.6'S and 653'W of NE Corner, Sec. 14, T41S, R23E, SLBM, San Juan County, Utah Elevations: DF 4562.4' GR 4552.9' KB 4563.6'
5-30 to 6-4	0	1495	Spudded 9:30 P.M. 5-30-58. Cemented 2 joints,13 3/8", 48# conductor pipe at 82' with 50 sacks cement treated with 2% Calcium Chloride. Water flow at 440'. Cemented (1267') 8 5/8", 28#, J-55 casing at 1277' (D.V. Tool at 400') with 250 sacks 1:1 Pozzo mix followed by 200 sacks cement treated with 2% Calcium Chloride. Opened DV tool and cemented with 250 sacks 1:1 Pozzo mix followed by approximately 70 sacks cement (20 bbls. 15.6# mud ahead of cement slurry). Good returns to surface. Flanged up and waited on cement. Cement settled back around outside of casing; cemented with 25 sacks from top. Pressure tested casing and BOP with 700 psi for 15 minutes, OK.
6-5 to 6-19	1495	5357	Drilled 3862', Stuck pipe at 4203', spotted 30 bbls. oil, pulled pipe loose after 9 hours.

CONDITION AT BEGINNING OF PERIOD				
HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12				
DRILL PIPE SIZES				

JUL 28 1958

W. A. Kennedy

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

North Desert Creek
WELL NO. 42-14

DRILLING REPORT
FOR PERIOD ENDING 6-24-58

Ratherford (FIELD)
San Juan, Utah (COUNTY)
14 (SECTION OR LEASE)
T41S, R23E (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
6-20	5357	5372	Drilled 15'. Ran Electrical Survey and Gamma Ray-Neutron Log.
6-21	5372	----	Ran and cemented (5361') 5 1/2", 14#, J-55 casing at 5371' with 200 sacks cement. Final pressure 1500 psi, Pressure tested casing with 1500 psi for 15 minutes, OK.
6-22 to 6-24	5372	5524	Drilled 152'. Ran Induction-Electrical Survey, Gamma Ray-Neutron Log and Microlog. Displaced mud with water. Released rig 12 midnight 6-24-58.

Checked BOP daily

Mud Summary
Wt 9.5-9.9 #/gal.
Vis 37-46 sec
WL 9.4-20 cc
FC 2/32"

Contractor: Moran Bros. Inc.
Drillers: T. M. Ash
H. A. Sheppard
M. E. Ridens

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1282	8 5/8"	1277'
7 7/8"	1282	5372	5 1/2"	5371'
4 3/4"	5372	5524		

DRILL PIPE SIZES

W

W. A. Kennedy
SIGNED

FD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

North Desert Creek
WELL NO. 42-14

Ratherford
(FIELD)

DRILLING REPORT
FOR PERIOD ENDING

14
(SECTION OR LEASE)

San Juan, Utah
(COUNTY)

7-2-58

T41S, R23E
(TOWNSHIP OR RANCHO)

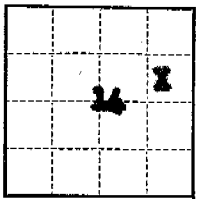
DAY	DEPTHS FROM	DEPTHS TO	REMARKS
7-1	5524	TD	Ran 141 jets, 2 7/8" EVE tubing with bull plug at 5521, perforated nipple 5511-5515, seating nipple at 5510'. Washed open hole interval 5371 to 5524 with 500 gallons mud acid. Displaced water with oil. Acidized with 1000 gallons regular acid and 5000 gallons retarded acid overflushed with 120 bbls. oil. Macimum pressure 3500 psi, Minimum pressure 3000 psi, average injection rate 2.6 bbls./min.
7-2			INITIAL PRODUCTION Flowing, 991 B/D gross, 982 B/D clean, cut 0.9%, Gas 442 MCF/D, GOR 450, TP 160, CPO, Completed 7-2-58.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1282	8 5/8"	1277'
7 7/8"	1282	5372	5 1/2"	5371'
4 3/4"	5372	5524		

DRILL PIPE SIZES

Form 9-331 b
(April 1952)



(SUBMIT IN TRIPLICATE)

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

Indian Agency Navajo

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee Tribal Lands

Lease No. 14-20-603-247

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	X
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL		Subsequent Report of Well Completion	X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July 3, 1958

North Desert Creek
Well No. 42-14 is located 1976.6 ft. from {N} line and 653 ft. from {E} line of sec. 14

NE 14	41S	23E	SLBM
(¼ Sec. and Sec. No.)	(Twp.)	(Range)	(Meridian)

Rattlesnake	San Juan	Utah
(Field)	(County or Subdivision)	(State or Territory)

The elevation of the kelly bushing above sea level is 4563.6 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

6-20-58 Cemented 5-1/2" 14# casing at 5371' with 200 sacks regular cement.
6-21 to 6-24-58 Drilled 152'. Ran Induction electrical Gamma ray and Microlog.
7-1-58 Ran 2-7/8" tubing with bull plug at 5521', perforated nipple 5511-15', seating nipple 5510'. Washed formation with 500 gal. mud acid. Then acidized with 1000 gal. regular acid and 5000 gal. retarded acid.
7-2-58 Swabbed and flowed 207 bbls. oil, 29 bbls. water in 9 hrs.
INITIAL PRODUCTION: Flowing (6 hr. test) 992 B/D gross rate, 982 B/D oil rate, 0.9% cut, 442 MCF/D gas rate, GOR 450, TP 160. CP 0.

Completed 7-2-58

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company

Address 101 S. Behrend Ave.

Farmington, N. M.

By W. M. C. Mullin

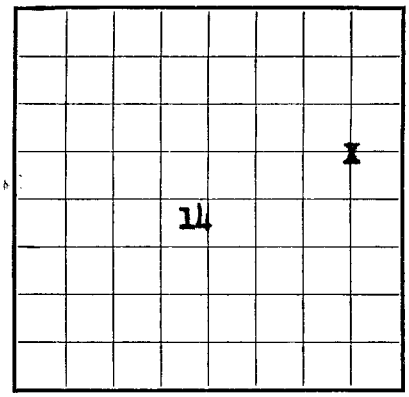
Title Division Exploitation Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—8437b-8

Form 9-330

Budget Bureau No. 42-R355.4.
Approval expires 12-31-60.

U. S. LAND OFFICE Window Rock, Ariz.
SERIAL NUMBER 14-20-603-247
LEASE OR PERMIT TO PROSPECT



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Shell Oil Company Address 101 South Behrend, Farmington, N.M.

Lessor or Tract Tribal-North Desert Creek Field Ratherford State Utah

Well No. 42-14 Sec. 14 T. 41S R. 23E Meridian SLBM County San Juan

Location 1976.6 ft. {N./S.} of N Line and 653 ft. {E./W.} of E Line of Sec. 14 Elevation 4564 KB
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed Original signed by B. W. SHEPARD

Date July 9, 1958 Title Exploitation Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling May 30, 1958 Finished drilling June 24, 1958

OIL OR GAS SANDS OR ZONES

(open hole) *(Denote gas by G)*

No. 1, from 5371 to 5524 No. 4, from — to —

No. 2, from — to — No. 5, from — to —

No. 3, from — to — No. 6, from — to —

IMPORTANT WATER SANDS

No. 1, from 400'± to — No. 3, from — to —

No. 2, from — to — No. 4, from — to —

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
8 5/8"	28	8	—	1267	Baker	—	—	—	Surface
5 1/2"	14	8	—	5361	Baker	—	5371	5524 (gross)	Production

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8 5/8"	1277	500 Pozzmix + 305	Displacement	—	—
5 1/2"	5371	200	Displacement	—	—

PLUGS AND ADAPTERS

Heaving plug—Material — Length — Depth set —

Adapters—Material — Size —

FOLD | MARK

8 5/8"	1277	500 Pozzmix + 305	Displacement	—	—	
5 1/2"	5371	200	Displacement	—	—	

FOLD | MARK

PLUGS AND ADAPTERS

Heaving plug—Material ..... Length ..... Depth set .....

Adapters—Material ..... Size .....

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from 0 feet to 5524 feet, and from — feet to — feet

Cable tools were used from — feet to — feet, and from — feet to — feet

DATES

July 9, 19 58 — 982 Put to producing July 2, 19 58

The production for the first 24 hours was 991 barrels of fluid of which 99.1% was oil; —% emulsion; 0.9% water; and —% sediment. Gravity, ~~BB~~ Approx. 41° API

If gas well, cu. ft. per 24 hours ..... Gallons gasoline per 1,000 cu. ft. of gas .....

Rock pressure, lbs. per sq. in. .....

EMPLOYEES

Moran Bros., Inc.

T. M. Ash, Driller — M. E. Ridens, Driller

H. A. Sheppard, Driller — ....., Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
2037	2140	103	Shinarump
2140	2273	133	Moenkopi
2273	4271	1998	Cutler
4271	5352	1081	Upper Hermosa
5352	—	—	Paradox

[OVER]

16—43094-4

OIL & GAS CONSERVATION COMMISSION

(Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.: 96-004192 ✓

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: Ratherford Unit ✓

2. NAME OF OPERATOR: Phillips Oil Company

8. FARM OR LEASE NAME:

3. ADDRESS OF OPERATOR: P. O. Box 2920, Casper, WY 82602

9. WELL NO.:

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: See Attached

10. FIELD AND POOL, OR WILDCAT: N/A

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: See Attached

14. PERMIT NO.: See Attached

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

To show change of Operator only. Phillips Oil Company assumed operations effective December 1, 1983 from Phillips Petroleum Company. See attached for list of wells.

120 wells
14-42

RECEIVED
DEC - 8 1983

Org. & 3-BLM
1-The Navajo Nation
1-Mary Wiley Black
1-Lawrence E. Brock
1-Cheveron USA
1-Ralph Faxel
1-Royal Hogan
1-W. O. Keller
1-Dee Kelly Corp.
1-Robert Klabzuba
1-Micheal J. Moncrief
1-Richard B. Moncrief
1-Lee W. Moncrief
1-Mary H. Morgan
1-W. A. Moncrief
1-W. A. Moncrief, Jr.
1-L. F. Peterson
1-Shell Oil Co.
1-Southland Royalty Co.
1-Superior Oil Co.
1-Leroy Shave
1-Texaco, Inc.
1-Wade Wiley, Jr.
1-Edwin W. Word, Jr.
1-File

18. I hereby certify that the foregoing is true and correct

SIGNED A. E. Stuart TITLE Area Manager DATE 12/6/83

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

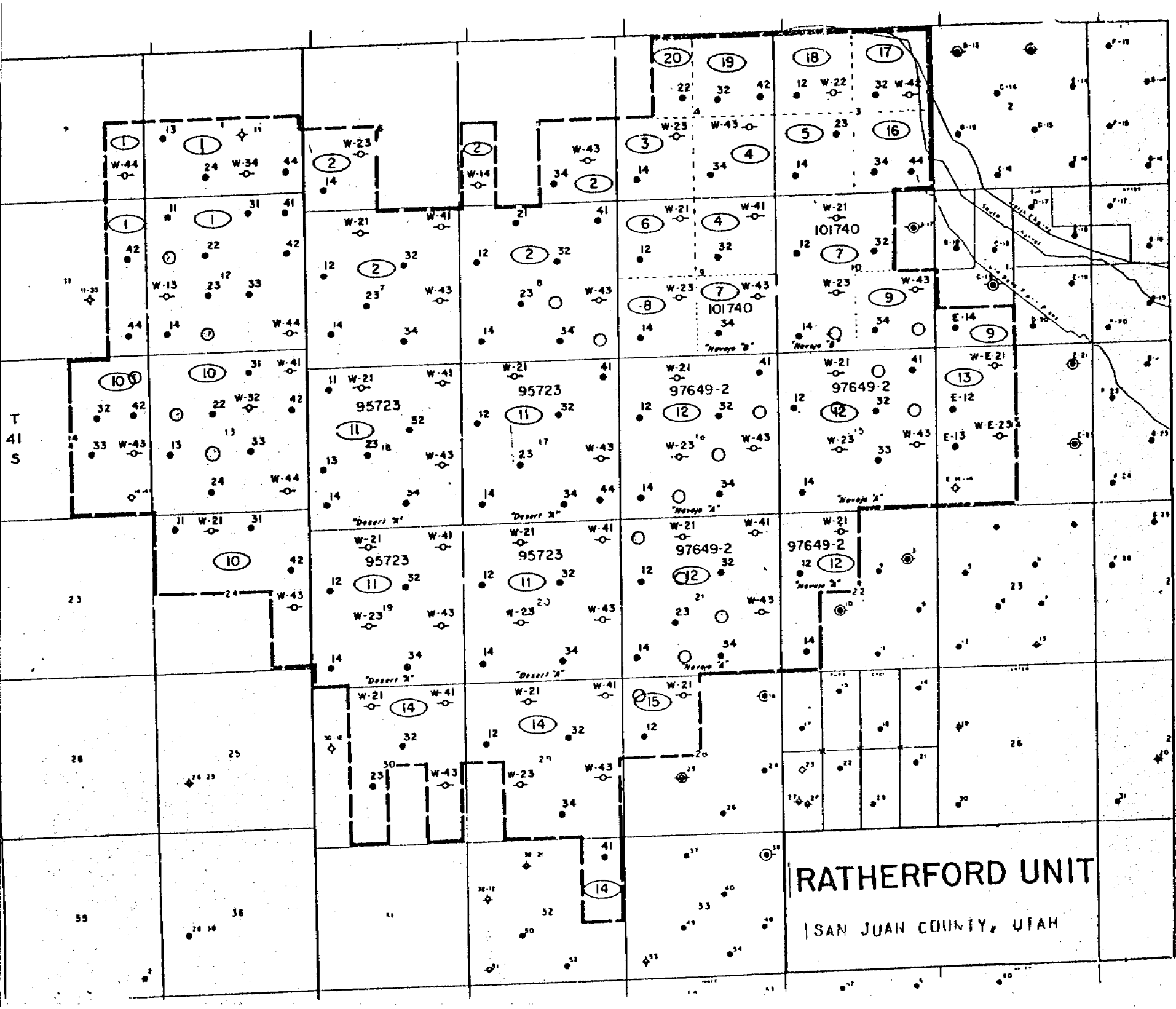
WELL NO.	WELL LOCATION	API NO.	STATUS
29-34	SW SE Sec.29-T41S-R24E	43-037-15340	Act.
30-23	NE SW Sec.30-T41S-R24E	43-037-15341	SI
30-32	SW NE Sec.30-T41S-R24E	43-037-15342	SI
32-41	NE NE Sec.32-T41S-R24E	43-037-15344	SI
1-13	NW SW Sec.1-T41S-R24E	43-037-15838	Act.
1-24	SE SW Sec.1-T41S-R24E	43-037-15839	Act.
1-44	SE SE Sec.1-T41S-R24E	43-037-15840	Act.
6-14	SW SW Sec.6-T41S-R24E	43-037-15894	Act.
7-12	SW NW Sec.7-T41S-R24E	43-037-15985	SI
7-14	SW SW Sec.7-T41S-R24E	43-037-15986	SI
7-23	NE SW Sec.7-T41S-R24E	43-037-15987	SI
7-32	SW NE Sec.7-T41S-R24E	43-037-15988	SI
7-34	SW SE Sec.7-T41S-R24E	43-037-15989	Act.
11-42	SE NE Sec.11-T41S-R23E	43-037-15841	Act.
11-44	SE SE Sec.11-T41S-R23E	43-037-15842	Act.
12-11	NW NW Sec.12-T41S-R23E	43-037-15843	Act.
12-14	SW SW Sec.12-T41S-R23E	43-037-15844	Act.
12-22	SE NW Sec.12-T41S-R23E	43-037-15845	Act.
12-23	NE SW Sec.12-T41S-R23E	43-037-15846	Act.
12-31	NW NE Sec.12-T41S-R23E	43-037-15847	Act.
12-33	NW SE Sec.12-T41S-R23E	43-037-15848	Act.
12-41	NE NE Sec.12-T41S-R23E	43-037-15849	Act.
12-42	SE NE Sec.12-T41S-R23E	43-037-15850	Act.
13-13	NW SW Sec.13-T41S-R23E	43-037-15851	Act.
13-22	SE NW Sec.13-T41S-R23E	43-037-15852	Act.
13-24	SE SW Sec.13-T41S-R23E	43-037-15853	Act.
13-31	NW NE Sec.13-T41S-R23E	43-037-15854	Act.
13-33	NW SE Sec.13-T41S-R23E	43-037-15855	Act.
13-42	SE NE Sec.13-T41S-R23E	43-037-15857	Act.
14-32	SW NE Sec.14-T41S-R23E	43-037-15858	Act.
14-33	NW SE Sec.14-T41S-R23E	43-037-15859	SI
14-42	SE NE Sec.14-T41S-R23E	43-037-15860	Act.
24-11	NW NW Sec.24-T41S-R23E	43-037-15861	SI
24-31	NW NE Sec.24-T41S-R23E	43-037-15862	Act.
E11-14	SW SW Sec.11-T41S-R24E	43-037-16167	Act.
3-12	SW NW Sec.3-T41S-R24E	43-037-15620	Act.
3-14	SW SW Sec.3-T41S-R24E	43-037-15124	Act.
3-23	NE SW Sec.3-T41S-R24E	43-037-15125	SI
3-32	SW NE Sec.3-T41S-R24E	43-037-15621	SI
3-44	SE SE Sec.3-T41S-R24E	43-037-15031	Act.
4-14	SW SW Sec.4-T41S-R24E	43-037-16163	Act.
4-22	SE NW Sec.4-T41S-R24E	43-037-15622	SI
4-32	SW NE Sec.4-T41S-R24E	43-037-15623	SI
4-34	SW SE Sec.4-T41S-R24E	43-037-16164	Act.
4-42	SE NE Sec.4-T41S-R24E	43-037-15624	SI
5-34	SW SE Sec.5-T41S-R24E	43-037-15983	SI
8-12	SW NW Sec.8-T41S-R24E	43-037-15991	Act.
8-14	SW SW Sec.8-T41S-R24E	43-037-15992	Act.
8-21	NE NW Sec.8-T41S-R24E	43-037-15993	Act.
8-23	NE SW Sec.8-T41S-R24E	43-037-15994	Act.
8-32	SW NE Sec.8-T41S-R24E	43-037-15995	SI

6. UNIT OPERATOR (Well operator)

Phillips Petroleum Company is hereby designated as Unit Operator and by signature hereto as Unit Operator agrees and consents to accept the duties of Unit Operator for the development and production of Unitized Substances as herein provided.

Taken from the Ratherford Unit Agreement.

Operator Name Change.


T
41
S
95723
97649-2
101740
"Desert 'A'"
"Navajo 'A'"
"Navajo 'B'"
RATHERFORD UNIT
SAN JUAN COUNTY, UTAH

PHILLIPS PETROLEUM COMPANY
CASPER, WYOMING 82602
BOX 2920
EXPLORATION AND PRODUCTION GROUP

April 2, 1986

State of Utah
Oil, Gas and Mining
Division of Natural Resources
355 W. North Temple, 3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Attn: Gilbert Hunt

RE: UIC Permit Applications
Ratherford Unit
San Juan County, Utah

Dear Mr. Hunt:

Attached are nine applications for the conversion of oil wells to injection at the Ratherford Unit. The required application attachments are the same as those submitted in February and have not been included in this package.

The well conversions applied for are:

13W31	16W14	18W14
14W42	17W14	24W31
16W12	17W41	24W42

Please contact R. C. Taylor of this office with any questions at (307) 237-3791.

Sincerely,

PHILLIPS PETROLEUM COMPANY

D. C. Gill
Area Manager

RCT/fb (39)
Casper RC

UTAH
NATURAL RESOU[redacted]
OIL, GAS AND MINING

3 Triad Center, Suite [redacted] Salt Lake City, UT 84180-120

Ph. (801)538-534

Commencement

MONTHLY REPORT OF ENHANCED RECOVERY PROJECT - PART 2

MONTHLY MONITORING OF INJECTION WELLS

Well Name	Inj. Press.	Inj. Rate	Annulus Press.	Monthly Inj. Vol.
9W41-43-037-16399 ✓	SI	SI		SI
9W43 43-037-16400 ✓	SI	SI		SI
10W21 43-037-16401 ✓	SI	SI		SI
10W23 43-037-16402 ✓	1250	270		7548
10W43 43-037-16403 ✓	1225	24		6605
11W44 43-037-15842 ✓	2300	235		6581
12W13 43-037-16404 ✓	2350	114		3180
12W22 43-037-15845 ✓	300	618		17,313
43-037-31151 12W24 New 2/21/87 ✓	0	559		4469
12W31 43-037-15847 ✓	0	485		13,589
12W33 43-037-15848 ✓	150	447		12,503
12W42 43-037-15850 ✓	1700	532		14,887
12W44 43-037-16405 ✓	SI	SI		SI
43-037-31152 13W11 New 2/20/87 ✓	0	287		2584
43-037-15852 13W22 New 2/23/87	0	391		2349
43-037-15853 13W24 New 2/3/87	0	332		8638
43-037-16406 13W32 2/2/87	Converted to a producing oil well			
13W42 43-037-15857 ✓	1850	365		10,211
13W44 43-037-16407 ✓	2300	165		4609
43-037-15860 14W42 New 2/27/87	0	353		707
14W43 43-037-16410 ✓	SI	SI		SI
15W21 43-037-16411 ✓	1075	302		8446

UIC CHECKLIST FOR APPLICATION APPROVAL

OPERATOR Phillips Petroleum WELL NUMBER Rutherford 14-42

SEC. 14 T. 41S R. 23E COUNTY SAN JUAN

API # 43-037-15860

NEW WELL _____ DISPOSAL WELL _____ ENHANCED RECOVERY WELL X

- Plat showing surface ownership	Yes X	No _____
- Application forms complete	Yes X	No _____
- Schematic of well bore	Yes X	No _____
- Adequate geologic information	Yes X	No _____
- Rate and Pressure information	Yes X	No _____
- Fluid source	Yes X	No _____
- Analysis of formation fluid	Yes X	No _____
- Analysis of injection fluid	Yes X	No _____
- USDW information	Yes X	No _____
- Mechanical integrity test	Yes X	No _____

Comments: # of wells w/in 2½ mile radius = 10 wells
9 Prod., 1 Inj.
Open hole injection

Reveiwed by Dorothy Swindel 4/10/86

Received 4/9/86 mp

FORM NO. DOGM-UIC-1
(Revised 1982)

STATE OF UTAH
DIVISION OF OIL, GAS, AND MINING
ROOM 4241 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
(801) 533-5771
(RULE I-5 & RULE I-4)

IN THE MATTER OF THE APPLICATION OF
Phillips Petroleum Company
ADDRESS P. O. Box 2920
Casper, WY ZIP 82602
INDIVIDUAL ___ PARTNERSHIP ___ CORPORATION X
FOR ADMINISTRATIVE APPROVAL TO DISPOSE OR INJECT FLUID INTO THE 14 W42 WELL
SEC. 14 TWP. 41S RANGE 23 E
San Juan COUNTY, UTAH

CAUSE NO. C-3 (B)

ENHANCED RECOVERY INJ. WELL	☒
DISPOSAL WELL	☐
LP GAS STORAGE	☐
EXISTING WELL (RULE I-4)	☐

APPLICATION

Comes now the applicant and shows the Corporation Commission the following:
1. That Rule I-5 (g) (iv) authorizes administrative approval of enhanced recovery injections, disposal or LP Gas storage operations.
2. That the applicant submits the following information.

Lease Name: Ratherford Unit	Well No.: 14 W42	Field: Greater Aneth	County: San Juan
Location of Enhanced Recovery Injection or Disposal Well: 14 W42	Sec. 14	Twp. 41S	Rge. 23 E
New Well To Be Drilled: Yes ☐ No ☒	Old Well To Be Converted: Yes ☒ No ☐	Casing Test: Yes ☐ No ☒ Date ___	
Depth-Base Lowest Known Fresh Water Within ½ Mile: Wingate 1550'	Does Injection Zone Contain Oil-Gas-Fresh Water Within ½ Mile: YES ☒ NO ☐	State What: Oil & Gas	
Location of Injection Source(s): Desert Creek Paradox I & II/ San Juan River	Geologic Name(s) and Depth of Source(s): Desert Creek (5371') San Juan River (Surface)		
Geologic Name of Injection Zone: Desert Creek Zone I	Depth of Injection Interval: 5371 to 5524		
a. Top of the Perforated Interval: 5371	b. Base of Fresh Water: 1550	c. Intervening Thickness (a minus b): 3821	
Is the intervening thickness sufficient to show fresh water will be protected without additional data? YES	NO See previously submitted material, attachment #4		
Lithology of Intervening Zones: See previously submitted material, attachment #1			
Injection Rates and Pressures: Maximum 500 B/D; Not to exceed approximately 3000 PSI			

The Names and Addresses of Those to Whom Notice of Application Should be Sent.

Navajo Tribe, Minerals Dept., P. O. Box 146, Window Rock, AZ 86515
Mobil Oil Corp. Attn; Joint Interest Advisor P. O. Box 5444 Denver, CO 80217
Texaco Inc., P. O. Box 2100, Denver, CO 80201

State of Wyoming)
County of Natrona)

Phillips Petroleum Company
Applicant

Before me, the undersigned authority, on this day personally appeared D. C. Gill known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states, that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Suscribed and sworn to before me this 4th day of April, 19 86

DONALD L. HUDSON - Notary Public
County of Natrona State of Wyoming
SEAL
My Commission Expires Nov. 3, 1986

Donald L. Hudson
Notary Public in and for Natrona Co., Wyoming

My commission expires Nov. 3, 1986

(OVER)

FORM DOGM-UIC-1 (continued)

INSTRUCTIONS

1. Attach qualitative and quantitative analysis of representative sample of water to be injected and a qualitative and quantitive analysis of the injection formation of water.

2. Attach plat showing subject well and all known oil and gas wells, abandoned, drilling and dry holes within one-half mile, together and with the name of the operator(s).

3. Attach Drillers Log (Form DOGM-UIC-2). (Appropriate Surety must be on file with Conservation Division or appropriate government agencies.)

4. Attach Electric or Radioactivity Log of Subject well (if released).

5. Attach schematic drawing of subsurface facilities including; Size, setting depth, amount of cement used measured or calculated tops of cement surface, intermediate (if any) and production casings; size and setting depth of tubing; type and setting depth of packer; geologic name of injection zone showing top and bottom of injection interval.

6. If the application is for a NEW well the original and six (6) copies of the application and three (3) complete sets of attachments shall be mailed to the Division. For EXISTING well applications (Rule I-4) only ONE copy of the application and ONE complete set of attachments are required to be mailed to the Division.

7. The Division is required to send notice of application to he surface owner of the land within one-half mile of the injection well and to each operator of a producing leasehole within one-half mile of the injection well. List all required names and addresses in the appropriate space provided on the front of this form.

8. Notice that an application has been filed shall be published by the Division in a newspaper of general circulation in the county of publication before the application is approved. The notice shall include the name and address of applicant, location of proposed injection or disposal well, injection zone, injection pressure and volume. If no written objection is received within 15 days from date of publication the application may be approved administratively.

9. A well shall not be used for injection or disposal unless completed machine accounting Form DOGM-UIC-3b is filed by January 31st each year.

10. Approval of this application, if granted, is valid only as long as there is no substantial change in the operations set forth in the application. A substantial operation change requires the approval of a new application.

11. If there is less intervening thickness required by Rule I-5 (b) 4, attach sworn evidence and data.

12. For enhanced recovery projects, information required by Rule I-4 which is common to more than one well, need be reported only once on the application.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
Surface 28#	8 5/8"	1277'	805 SX	Surface	Returns
Intermediate	none				
Production 14#	5 1/2"	5371'	200SX	4294'	CALCULATED
Tubing	2-3/8 or 2-7/8	Name - Type - Depth of Tubing Packer Baker type AB Tension Pkr or Similar (5271)			
Total Depth 5524	Geologic Name - Inj. Zone Desert Creek Zone 1	Depth - Top of Inj. Interval 5371		Depth - Base of Inj. Interval 5524	

FIELD: GREATER ANETH San Juan Co, Ut

RESERVOIR: Desert Creek Zone I

WI COMPLETION: proposed

PRESENT STATUS: Conversion to water injector

RKB 4563.6

GL 4552.9

SURFACE CASING: 8 5/8" 28# J-55

Well #: 14-W42

PRODUCTION CASING: 14# 5 1/2" J-55

1277'

PERFORATIONS:

Open hole 5371'-5524'

PACKER: Baker Model AB Tension Type or Similar Set at 5271' (approx)

4294

5271

5371'

Perfs

PBTD: 5524'

OTD: 5524'

Phillips Petroleum Company

STATE OF UTAH
DIVISION OF OIL, GAS, AND MINING
ROOM 4241 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
(801) 533-5771
(RULE I-5 & RULE I-4)

FORM NO. DOGM-UIC-1
(Revised 1982)

IN THE MATTER OF THE APPLICATION OF
Phillips Petroleum Company
ADDRESS P. O. Box 2920
Casper, WY ZIP 82602
INDIVIDUAL ___ PARTNERSHIP x CORPORATION ___
FOR ADMINISTRATIVE APPROVAL TO DISPOSE OR
INJECT FLUID INTO THE 14 W42 WELL
SEC. 14 TWP. 41S RANGE 23 E
San Juan COUNTY, UTAH

CAUSE NO. C-3 (B)

ENHANCED RECOVERY INJ. WELL	☒
DISPOSAL WELL	☐
LP GAS STORAGE	☐
EXISTING WELL (RULE I-4)	☐

APPLICATION

Comes now the applicant and shows the Corporation Commission the following:
1. That Rule I-5 (g) (iv) authorizes administrative approval of enhanced recovery injections, disposal or LP Gas storage operations.
2. That the applicant submits the following information.

Lease Name: Ratherford Unit	Well No.: 14 W42	Field: Greater Aneth	County: San Juan
Location of Enhanced Recovery Injection or Disposal Well: 14 W42	Sec. 14	Twp. 41S	Rge. 23 E
New Well To Be Drilled: Yes ☐ No ☒	Old Well To Be Converted: Yes ☒ No ☐	Casing Test: Yes ☐ No ☒ Date ___	
Depth-Base Lowest Known Fresh Water Within ½ Mile: Wingate 1550'	Does Injection Zone Contain Oil-Gas-Fresh Water Within ½ Mile: YES ☒ NO ☐	State What: Oil & Gas	
Location of Injection Source(s): Desert Creek Paradox I & II/ San Juan River	Geologic Name(s) and Depth of Source(s): Desert Creek (5371') San Juan River (Surface)		
Geologic Name of Injection Zone: Desert Creek Zone I	Depth of Injection Interval: 5371 to 5524		
a. Top of the Perforated Interval: 5371	b. Base of Fresh Water: 1550	c. Intervening Thickness (a minus b): 3821	
Is the intervening thickness sufficient to show fresh water will be protected without additional data? YES	NO	See previously submitted material, attachment #4	
Lithology of Intervening Zones: See previously submitted material, attachment #1			
Injection Rates and Pressures: Maximum 500 B/D; Not to exceed approximately 3000 PSI			

The Names and Addresses of Those to Whom Notice of Application Should be Sent.

Navajo Tribe, Minerals Dept., P. O. Box 146, Window Rock, AZ 86515
Mobil Oil Corp. Attn; Joint Interest Advisor P. O. Box 5444 Denver, CO 80217
Texaco Inc., P. O. Box 2100, Denver, CO 80201

State of Wyoming)
County of Natrona)

Phillips Petroleum Company
Applicant

Before me, the undersigned authority, on this day personally appeared D. C. Gill known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states, that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Suscribed and sworn to before me this 4th day of April, 19 86

DONALD L. HUDSON - Notary Public
County of Natrona State of Wyoming
SEAL
My Commission Expires Nov. 3, 1986

Donald L. Hudson
Notary Public in and for Natrona Co., Wyoming

My commission expires Nov. 3, 1986

(OVER)

FORM DOGM-UIC-1 (continued)

INSTRUCTIONS

1. Attach qualitative and quantitative analysis of representative sample of water to be injected and a qualitative and quantitive analysis of the injection formation of water.

2. Attach plat showing subject well and all known oil and gas wells, abandoned, drilling and dry holes within one-half mile, together and with the name of the operator(s).

3. Attach Drillers Log (Form DOGM-UIC-2). (Appropriate Surety must be on file with Conservation Division or appropriate government agencies.)

4. Attach Electric or Radioactivity Log of Subject well (if released).

5. Attach schematic drawing of subsurface facilities including; Size, setting depth, amount of cement used measured or calculated tops of cement surface, intermediate (if any) and production casings; size and setting depth of tubing; type and setting depth of packer; geologic name of injection zone showing top and bottom of injection interval.

6. If the application is for a NEW well the original and six (6) copies of the application and three (3) complete sets of attachments shall be mailed to the Division. For EXISTING well applications (Rule I-4) only ONE copy of the application and ONE complete set of attachments are required to be mailed to the Division.

7. The Division is required to send notice of application to he surface owner of the land within one-half mile of the injection well and to each operator of a producing leasehole within one-half mile of the injection well. List all required names and addresses in the appropriate space provided on the front of this form.

8. Notice that an application has been filed shall be published by the Division in a newspaper of general circulation in the county of publication before the application is approved. The notice shall include the name and address of applicant, location of proposed injection or disposal well, injection zone, injection pressure and volume. If no written objection is received within 15 days from date of publication the application may be approved administratively.

9. A well shall not be used for injection or disposal unless completed machine accounting Form DOGM-UIC-3b is filed by January 31st each year.

10. Approval of this application, if granted, is valid only as long as there is no substantial change in the operations set forth in the application. A substantial operation change requires the approval of a new application.

11. If there is less intervening thickness required by Rule I-5 (b) 4, attach sworn evidence and data.

12. For enhanced recovery projects, information required by Rule I-4 which is common to more than one well, need be reported only once on the application.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
Surface 28#	8 5/8"	1277'	805 sx	Surface	Returns
Intermediate	none				
Production 14#	5 1/2"	5371'	200 sx	4294'	Calculated
Tubing	2-3/8 or 2-7/8	Name - Type - Depth of Tubing Packer: Baker type AB Tension Pkr or Similar (5271)			
Total Depth: 5524	Geologic Name - Inj. Zone: Desert Creek Zone 1	Depth - Top of Inj. Interval: 5371		Depth - Base of Inj. Interval: 5524	

LOCATION: SENE Sec. 14 - T41S - R23E

FIELD: GREATER ANETH San Juan Co, Ut

RESERVOIR: Desert Creek Zone 1

PRESENT COMPLETION: proposed

PRESENT STATUS: Conversion to water injector

RKB 4563.6

GL 4552.9

SURFACE CASING: 8 5/8" 28# J-55

Well #: 14-W42

PRODUCTION CASING: 14# 5 1/2" J-55

1277'

PERFORATIONS:

Open hole 5371'-5524'

PACKER: Baker Model AB Tension Type or Similar Set at 5271' (approx)

5371'

PBTD: 5524'

OTD: 5524'

Phillips Petroleum Company

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

April 23, 1986

Newspaper Agency Corporation
Legal Advertising
143 South Main - Mezzanine Floor
Salt Lake City, Utah 84110

Gentlemen:

RE: Cause No. UIC-082

Enclosed is a Notice of Application of Administrative Approval before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible, but no later than the 7th day of May, 1986. In the event that said notice cannot be published by this date, please notify me immediately by calling 538-5340.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

Sincerely,

Marlayne Poulsen
for
Marjorie L. Anderson
Administrative Assistant

mfp

Enclosure

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

April 23, 1986

San Juan Record
Legal Advertising
P.O. Box 879
Monticello, Utah 84535

Gentlemen:

RE: Cause No. UIC-082

Enclosed is a Notice of Application of Administrative Approval before the Division of Oil, Gas and Mining, Department of Natural Resources, State of Utah.

It is requested that this notice be published ONCE ONLY, as soon as possible, but no later than the 7th day of May, 1986. In the event that said notice cannot be published by this date, please notify me immediately by calling 538-5340.

Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

Sincerely,

Marlayne Louber
for
Marjorie L. Anderson
Administrative Assistant

mfp

Enclosure

UIC-082

Utah State Department of Health
Water Pollution Control
Attn: Loren Morton
4241 State Office Building
Salt Lake City, Utah 84114

U.S. Environmental Protection Agency
Suite 1300
Attn: Mike Strieby
999 18th Street
Denver, Colorado 80202-2413

Bureau of Land Management
Consolidated Financial Center
324 South StateStreet
Salt Lake City, Utah 84111-2303

Navajo Tribe
Minerals Department
PO Box 146
Window Rock, Arizona 86515

Mobil Oil Corporation
Attn: Joint Interest Advisor
PO Box 5444
Denver, Colorado 80217

Texaco Incorporated
PO Box 2100
Denver, Colorado 80201

Phillips Petroleum Company
PO Box 2920
Casper, Wyoming 82602

Newspaper Agency Corporation
Legal Advertising
143 South Main - Mezzanine Floor
Salt Lake City, Utah 84110

San Juan Record
Legal Advertising
PO Box 879
Monticello, Utah 84535

Marlayne Poulsen
April 23, 1986

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH

---ooOoo---

IN THE MATTER OF THE APPLICATION OF PHILLIPS PETROLEUM COMPANY, FOR ADMINISTRATIVE APPROVAL TO INJECT FLUID INTO WELLS TO BE CONVERTED TO ENHANCED RECOVERY INJECTION WELLS LOCATED IN SECTIONS 13, 14 AND 24, TOWNSHIP 41 SOUTH, RANGE 23 EAST; AND SECTIONS 16, 17, AND 18, TOWNSHIP 41 SOUTH, RANGE 24 EAST, S.L.M. SAN JUAN COUNTY, UTAH : CAUSE NO. UIC-082

---ooOoo---

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Phillips Petroleum Company, P.O. Box 2920, Casper, Wyoming 82602, has requested adminstrative approval from the Division to convert the following listed wells to enhanced recovery water injection wells:

RATHERFORD UNIT - San Juan County, Utah

#13-31, Sec. 13, T41S, R23E
#14-42, Sec. 14, T41S, R23E
#24-42, Sec. 24, T41S, R23E
#24-31, Sec. 24, T41S, R23E
#16-12, Sec. 16, T41S, R24E
#16-14, Sec. 16, T41S, R24E
#17-14, Sec. 17, T41S, R24E
#17-41, Sec. 17, T41S, R24E
#18-14, Sec. 18, T41S, R24E

INJECTION INTERVAL: Desert Creek Formation 5371' to 5640'
MAXIMUM ESTIMATED SURFACE PRESSURE: 3000 psig
MAXIMUM ESTIMATED WATER INJECTION RATE: 500 BWPD

Approval of this Application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to the Division of Oil, Gas and Mining, Attention: UIC Program Manager, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 21st day of April, 1986.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

Marjorie L. Anderson
MARJORIE L. ANDERSON
Administrative Assistant

Affidavit of Publication

ADM-35B

STATE OF UTAH,

County of Salt Lake **ss.**

BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH CAUSE NO. UIC-082

IN THE MATTER OF THE APPLICATION OF PHILLIPS PETROLEUM COMPANY, FOR ADMINISTRATIVE APPROVAL TO INJECT FLUID INTO WELLS TO BE CONVERTED TO ENHANCED RECOVERY INJECTION WELLS LOCATED IN SECTIONS 13, 14 AND 24, TOWNSHIP 41 SOUTH, RANGE 23 EAST: AND SECTIONS 16, 17, AND 18, TOWNSHIP 41 SOUTH, RANGE 24 EAST, S.L.M. SAN JUAN COUNTY, UTAH.

THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that Phillips Petroleum Company, P.O. Box 2920, Casper, Wyoming 82602, has requested administrative approval from the Division to convert the following listed wells to enhanced recovery water injection wells:

RATHERFOR UNIT
San Juan County, Utah
#13-31, Sec. 13, T41S, R23E
#14-42, Sec. 14, T41S, R23E
#24-42, Sec. 24, T41S, R23E
#24-31, Sec. 24, T41S, R23E
#16-12, Sec. 16, T41S, R24E
#16-14, Sec. 16, T41S, R24E
#17-14, Sec. 17, T41S, R24E
#17-41, Sec. 17, T41S, R24E
#18-14, Sec. 18, T41S, R24E

INJECTION INTERVAL: Desert Creek Formation 5371' to 5640'
MAXIMUM ESTIMATED SURFACE PRESSURE: 3000 psig
MAXIMUM ESTIMATED WATER INJECTION RATE: 500 BWPD

Approval of this Application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to the Division of Oil, Gas and Mining, Attention: UIC Program Manager, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203.

DATED this 21st day of April, 1986.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
MARJORIE L. ANDERSON
Administrative Assistant

M-52

.....Cheryl Gierloff.....

Being first duly sworn, deposes and says that he/she is legal advertising clerk of THE SALT LAKE TRIBUNE, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah, and of the DESERET NEWS, a daily newspaper printed in the English language with general circulation in Utah, and published in Salt Lake City, Salt Lake County, in the State of Utah.

That the legal notice of which a copy is attached hereto

.....Cause No. UIC-082 - Application of Phillips.....

.....Petroleum Company.....

.....

.....

.....

was published in said newspaper on.....

.....May 7, 1986.....

.....Cheryl Gierloff.....

Legal Advertising Clerk

Subscribed and sworn to before me this .....20th..... day of

.....May..... A.D. 1986.....

.....

Notary Public

My Commission Expires

March 1, 1988

AFFIDAVIT OF PUBLICATION

Public notice

BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF PHILLIPS PETROLEUM COMPANY, FOR ADMINISTRATIVE APPROVAL TO INJECT FLUID INTO WELLS TO BE CONVERTED TO ENHANCED RECOVERY INJECTION WELLS LOCATED IN SECTIONS 13, 14 AND 24, TOWNSHIP 41 SOUTH, RANGE 23 EAST; AND SECTIONS 16, 17 AND 18, TOWNSHIP 41 SOUTH, RANGE 24 EAST, S.L.M. SAN JUAN COUNTY, UTAH

CAUSE NO. UIC-082

IN THE STATE OF UTAH TO ALL INTERESTED PARTIES IN THE ABOVE ENTITLED MATTER

Notice is hereby given that Phillips Petroleum Company, P.O. Box 2920, Casper, Wyoming 82602, has requested administrative approval from the Division to convert the following listed wells to enhanced recovery water injection wells:

RATHERFORD UNIT
San Juan County, Utah
#13-31, Sec. 13, T41S, R23E
#14-42, Sec. 14, T41S, R23E
#24-42, Sec. 24, T41S, R23E
#24-31, Sec. 24, T41S, R23E
#16-12, Sec. 16, T41S, R24E
#16-14, Sec. 16, T41S, R24E
#17-14, Sec. 17, T41S, R24E
#17-41, Sec. 17, T41S, R24E
#18-14, Sec. 18, T41S, R24E

INJECTION INTERVAL: Desert Creek Formation 5371' to 5640'
MAXIMUM ESTIMATED SURFACE PRESSURE: 3000 psig
MAXIMUM ESTIMATED WATER INJECTION RATE: 500 BWPD

Approval of this Application will be granted unless objections are filed with the Division of Oil, Gas and Mining within fifteen days after publication of this Notice. Objections, if any, should be mailed to the Division of Oil, Gas and Mining, Attention: UIC Program Manager, 355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84108-1203.

DATED this 21st day of April, 1986.

STATE OF UTAH
DIVISION OF OIL,
GAS AND MINING
s/ MARJORIE L. ANDERSON

565-8622 4-23-21c
Laying bone, David Bland (303)

I, Joyce Martin [redacted]g duly sworn, depose and say that I am the publisher of the San Juan Record, a weekly newspaper of general circulation published at Monticello, Utah, every Wednesday; that notice of Cause No. UIC-082

a copy of which is hereunto attached, was published in the regular and entire issue of each number of said newspaper for a period of one issues, the first publication having been made on April 30, 1986. and the last publication having been made on _____

Signature Joyce A Martin
Publisher

Subscribed and sworn to before me this 30th day of April, A.D. 1986.

Ingrid K Adams
Notary Public
Residing at Monticello, Utah,

My commission expires December 2, 1987

Mobil Oil Corporation

P.O. BOX 5444
DENVER, COLORADO 80217-5444

May 14, 1986

Utah Board of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Attn: R. J. Firth
Associate Director

SUPERIOR OIL COMPANY MERGER

Dear Mr. Firth:
On September 20, 1984, The Superior Oil Company (Superior) became a wholly owned subsidiary of Mobil Corporation. Since January 1, 1985, Mobil Oil Corporation (MOC), another wholly owned subsidiary of Mobil Corporation, has acted as agent for Superior and has operated the Superior-owned properties.

On April 24, 1986, Superior was merged with Mobil Exploration and Producing North America Inc. (MEPNA), which is also a wholly owned subsidiary of Mobil Corporation. MEPNA is the surviving company of the merger.

This letter is to advise you that all properties held in the name of Superior will now be held in the name of MEPNA; and that these properties will continue to be operated by MOC as agent for MEPNA.

Attached is a listing of all wells and a separate listing of injection-disposal wells, Designation of Agent and an organization chart illustrating the relationships of the various companies. If you have any questions or require additional documentation of this merger, please feel free to contact me at the above address or (303) 298-2577.

Very truly yours,

R. D. Baker
Environmental Regulatory Manager

CNE/rd
CNE8661

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

May 23, 1986

Phillips Petroleum Company
P.O. Box 2920
Casper, Wyoming 82602

Gentlemen:

RE: Injection Well Approval - Cause No. UIC-082

Administrative approval is hereby granted to convert the following wells to Class II enhanced recovery water injection wells:

RATHERFORD UNIT - San Juan County, Utah

#13-31, Sec. 13, T41S, R23E	#16-14, Sec. 16, T41S, R24E
#14-42, Sec. 14, T41S, R23E	#17-14, Sec. 17, T41S, R24E
#24-42, Sec. 24, T41S, R23E	#17-41, Sec. 17, T41S, R24E
#24-31, Sec. 24, T41S, R23E	#18-14, Sec. 18, T41S, R24E
#16-12, Sec. 16, T41S, R24E	

This approval is conditional upon full compliance with the UIC rules and regulations adopted by the Board of Oil, Gas and Mining, and construction and operation of the wells as outlined in the applications submitted.

If you have any questions concerning this matter, please do not hesitate to call or write.

Best regards,

Dianne R. Nielson

Dianne R. Nielson
Director

mfp
7627U

(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

(Other instructions on reverse side)

Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-247A
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo 122434
7. UNIT AGREEMENT NAME: SW-I-4192
8. FARM OR LEASE NAME: Ratherford Unit
9. WELL NO.: 14-42
10. FIELD AND POOL, OR WILDCAT: Greater Aneth
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 14-T41S-R23E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: Phillips Petroleum Company

3. ADDRESS OF OPERATOR: P. O. Box 2920, Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1976' FNL, 653' FEL (SE NE)

14. PERMIT NO.: 43-037-15860

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4564' RKB

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[X]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other) Convert to Water Injection			[X]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to convert Ratherford Unit #14-42, an open hole completion, from a Zone I & II producing well to a Zone I water injection well. After plugging back to Zone I, the well will be acidized with approximately 5600 gallons of 28% HCl Acid and placed on injection.

A 10' x 8' x 6' fenced pit will be constructed on location in a previously disturbed area. Upon completion of the workover the pit will be dried and recovered.

5-BLM, Farmington, NM
2-Utah O&G CC, Salt Lake City, Utah
1-P. J. Adamson
1-M. Williams, 302 TRW
1-J. R. Reno
1-B. J. Murphy
1-File RC

12/1/86
Approval letter 5/23/86

RECEIVED
NOV 21 1986
DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED D. C. Gill TITLE Area Manager DATE November 17, 1986

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-247A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO

1. OIL WELL ☐ GAS WELL ☐ OTHER: Water Injector

7. UNIT AGREEMENT NAME: SW-I-4192

2. NAME OF OPERATOR: Phillips Petroleum Company

8. FARM OR LEASE NAME: Ratherford Unit

3. ADDRESS OF OPERATOR: P.O. Box 2920, Casper, WY 82602

9. WELL NO.: 14W42

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1976' FNL, 653' FEL SE NE

10. FIELD AND POOL, OR WILDCAT: Greater Aneth

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 14-T41S-R23E

API# 43-037-15860

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4564' RKB

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Convert to water injection			XX
(Other)				(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Feb. 18, 1987 through Feb. 26, 1987

RU 2/18/87. COOH w/rods and tbg. Clean out hole to 5524'. Set hydromite Cal-seal plug across Zone II. TOC at 5448', new PBTD. Acidized Zone I w/3000 gal 28% HCL. Swbd back load. GIH w/Duoline 2-7/8" tbg and wtr inj pkr. Set pkr at 5312'. RD 2/26/87. HU to injection 2/27/87.

Production Before	28 BOPD, 15 BWPD
Injection After	353 BWPD @ 2200 psi

RECEIVED
AUG 4 1987
DIVISION OF OIL
GAS & MINING

4-BLM, Farmington, NM	1-Chieftain
2-Utah O&G CC, SLC, UT	1-Mobil Oil
1-M. Williams, B'Ville	1-Texaco, Inc.
1-J. Landrum, Denver	1-Chevron USA
1-J. Reno, Cortez	1-File RC

18. I hereby certify that the foregoing is true and correct

SIGNED D. C. Gill TITLE Area Manager DATE 7/27/87

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(November 1983)
(Formerly 9-331)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-247

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER Water Injection Well

7. UNIT AGREEMENT NAME: SW-I-4192

2. NAME OF OPERATOR: Phillips Petroleum Company

8. FARM OR LEASE NAME: Ratherford Unit

3. ADDRESS OF OPERATOR: 152 North Durbin, 2nd Floor, Casper, WY 82601

9. WELL NO.: #14W43

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 3300' FNL & 4770' FWL

10. FIELD AND POOL, OR WILDCAT: Greater Aneth

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 14-T41S-R23E

14. PERMIT NO.: 43-037-16410

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4583' RKB

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other) Long-Term Shut-in		X		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

It is hereby requested that Ratherford Unit #14W43 be approved for long-term shut-in.

Under existing market conditions, the well is not an economically viable producer. Tertiary recovery potential may exist, and long-term shut-in status is requested until tertiary recovery potential of the well can be evaluated and plans for its implementation developed.

5-BLM, Farmington, NM
2-Utah O & G CC, Salt Lake City, UT
1-P. J. Konkel
1-File-RC
1-M. Williams, 1370 G POB

ACCEPTED
~~APPROVED~~ BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 3-22-88
BY:

18. I hereby certify that the foregoing is true and correct

SIGNED D. C. Gill TITLE Area Manager DATE 2/25/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

***See Instructions on Reverse Side**

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DOWNHOLE SCHEMATIC

Date: 8/6/87

RATHERFORD Unit # 14W42

RKB Elev. 4564'

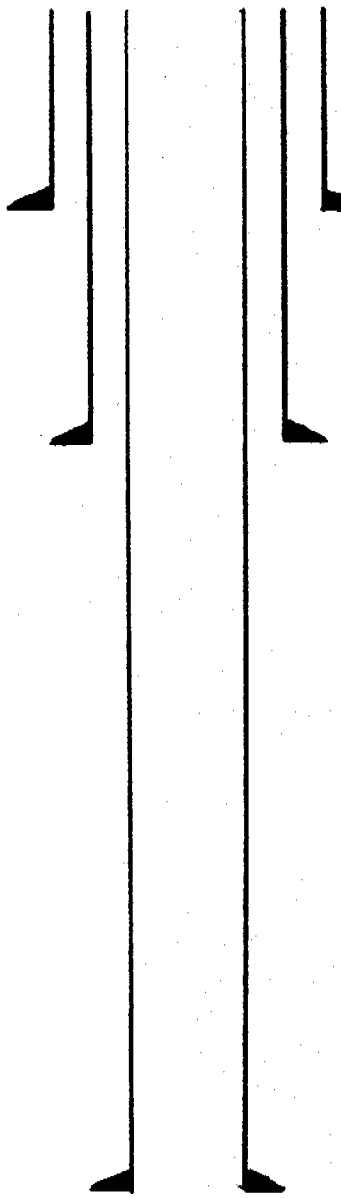
GL Elev. 4553'

RKB Above GL' 11'

Location SE NE sec. 14 T41S-R23E

Well Drld 7/9/58

Well Converted to injector 2/26/87



Conductor Csg @ '

Surface Csg. 8 5/8" @ 1277'

TOC 4690' CALC.

Tubing 2 7/8 @ 5,293' Duoline HT2

PACKER Otis Inter-lok Pkr. Nickel Coated @ 5,293

PERFS 5371 - 5448

PBTD 5,448'

Production Csg. 5 1/2" @ 5371' J-55 14#

All Perfs Zone I Unless noted

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER WATER INJECTION & WATER SUPPLY WELLS

2. NAME OF OPERATOR
PHILLIPS PETROLEUM COMPANY

3. ADDRESS OF OPERATOR
152 N. DURBIN, 2ND FLOOR, CASPER, WYOMING 82601

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
SEE ATTACHED

RECEIVED
MAR 20 1989
DIVISION OF OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
SW-I-4192

7. UNIT AGREEMENT NAME
RATHERFORD UNIT #7960041920

8. FARM OR LEASE NAME

9. WELL NO.
VARIOUS (see attached)

10. FIELD AND POOL, OR WILDCAT
GREATER ANETH

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sections 1 thru 30
T41S - R23E & 24E

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) CHANGE OF OWNERSHIP			XX
(Other)			☐	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This is to advise all Water Injection and Water Supply Wells on the Ratherford Unit, listed on the attached sheet, were sold to Phillips Petroleum Company, effective August 1, 1985.

(former Operator - Phillips Oil Company)

3 - BLM, Farmington, NM
2 - ~~Utah~~ O&G CC, SLC, UT
1 - File

4/1-23-K1 037-15860

18. I hereby certify that the foregoing is true and correct

SIGNED S. H. Oden TITLE District Superintendent DATE March 17, 1989

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

DEC 24 1990

5. Lease Designation and Serial No.: 24-20-603-370
6. If Indian, Allottee or Tribe Name: Navajo Tribal
7. If Unit or CA, Agreement Designation: SW-I-4192 Ratherford Unit
8. Well Name and No.: Ratherford Unit #14W42
9. API Well No.: 43-037-15860
10. Field and Pool, or Exploratory Area: Greater Aneth
11. County or Parish, State: San Juan County, Utah

1. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other Water Injector
2. Name of Operator: Phillips Petroleum Company
3. Address and Telephone No.: P. O. Box 1150, Cortez, CO 81321 (303)-565-3426
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 2976' FNL & 653' FEL, SE NE, Sec. 14-T41S-R23E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Clean Out Well, UIC Test	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

November 28, 1990 Through November 30, 1990

MI & RU well service unit 11/28/90. ND wellhead, NU BOP. Rel 5-1/2" Otis Interlock pkr w/on-off tool. COOH w/170 jts 2-7/8" Rice duolined tbg. GIH w/bit & csg scraper on workstring & clean out well to PBTD 5448'. COOH & LD bit & scraper. GIH w/5-1/2" Baker Lok-set pkr w/on-off tool & 170 jts 2-7/8" Rice duolined tbg, drifted & tested to 3000 psi. Set pkr at 5312'. Disengaged on-off tool & pmpd pkr fluid (120 bbls wtr w/27 gal Welchem WA-840). Engaged on-off tool. ND BOP, NU wellhead. Pressured annulus to 1080 psi for 45 min for UIC test, OK. Expelled tbg test plug, RD & MO well service unit and returned well to injection 11/30/90.

Injection Rate Prior to Work: 318 BWPD @ 0 psi
Injection Rate After Work 360 BWPD @ 0 psi

Distribution

5 - BLM, Farmington	1 - S. H. Oden	1 - Texaco, Inc.
2 - Utah O&GCC	1 - P. J. Konkel	1 - PPCo, Houston
1 - EPA, San Francisco	1 - Chieftain	1 - PPCo, Cortez, RC
1 - N. Anstine	1 - Mobil	

14. I hereby certify that the foregoing is true and correct

Signed S. H. Oden Title District Superintendent Date 12/18/90

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other Water Injector

2. Name of Operator
Phillips Petroleum Company

3. Address and Telephone No.
5525 Hwy 64 NBU 3004, Farmington, NM 87401 (505) 599-3412

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SE/NE Sec. 14, T41S, R23E
1976' FNL & 653' FEL

5. Lease Designation and Serial No.
14-20-603-247A

6. If Indian, Allottee or Tribe Name
Navajo Tribal

7. If Unit or CA, Agreement Designation
Ratherford Unit
SW-I-4192

8. Well Name and No.
Ratherford Unit #14W42

9. API Well No.
43-037-15860

10. Field and Pool, or Exploratory Area
Greater Aneth

11. County or Parish, State
San Juan, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

4-21-92 thru 4-24-92
MI & RU equipment. ND WH & NU BOP. COOH w/injection string. Found on/off tool to be damaged. Replaced on/off tool & reran 2-7/8" injection string and tested to 3000 psi. Set pkr @ 5282', circ. pkr fluid and performed MIT, 1200 psi for 30 min. Ken Lingo w/EPA witnessed MIT. Returned well to injection.

RECEIVED
APR 29 1992
DIVISION OF
OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed L. E. Robinson Title Sr. Drlg. & Prod. Engr. Date 4-27-92
L. E. Robinson

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

RECEIVED
MAY 29 1992
DIVISION OF
OIL GAS & MINING

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-247A

6. If Indian, Allottee or Tribe Name: Navajo Tribal

7. If Unit or CA, Agreement Designation: Ratherford Unit SW-I-4192

1. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other Water Injector

8. Well Name and No.: Ratherford Unit #14W42

2. Name of Operator: Phillips Petroleum Company

9. API Well No.: 43-037-15860

3. Address and Telephone No.: 5525 Hwy 64 NBU 3004, Farmington, NM 87401 (505) 599-3412

10. Field and Pool, or Exploratory Area: Greater Aneth

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SE/NE Sec. 14, T41S, R23E
1976' FNL & 653' FEL

11. County or Parish, State: San Juan, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Hydrotested Tbg	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

May 13 thru May 14, 1992
MI & RU equipment. ND WH and NU BOP. COOH w/tbg. RU Hydrotester. Hydrotested tbg into well. RD Hydrotester. Pmpd 120 bbls pkr fluid. Tested csg annulus to 1440 psi for 45 minutes for MIT - held. RD and returned well to injection.

14. I hereby certify that the foregoing is true and correct

Signed L. E. Robinson (L. E. Robinson) Title Sr. Drlg. & Prod. Engr. Date 5-26-92

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

FORM 10

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

P J KONKEL
PHILLIPS PETROLEUM COMPANY
5525 HWY 64 NBU 3004
FARMINGTON NM 87401

UTAH ACCOUNT NUMBER: N0772

REPORT PERIOD (MONTH/YEAR): 6 / 93

AMENDED REPORT ☐ (Highlight Changes)

Well Name / API Number	Entity	Location	Producing Zone	Well Status	Days Oper	Production Volumes OIL(BBL)	GAS(MCF)	WATER(BBL)
#21-23 4303713754	06280	41S 24E 21	DSCR	POW	29	1374	883	58
#3-44 4303715031	06280	41S 24E 3	DSCR	POW	30	111	94	2905
#3-14 4303715124	06280	41S 24E 3	DSCR	POW	30	67	23	302
#9-12 4303715126	06280	41S 24E 9	DSCR	POW	30	112	654	17363
#9-14 4303715127	06280	41S 24E 9	DSCR	POW	30	201	315	423
#28-12 4303715336	06280	41S 24E 28	PRDX	POW	29	112	47	2428
#29-12 4303715337	06280	41S 24E 29	PRDX	POW	29	56	0	672
#29-32 4303715339	06280	41S 24E 29	DSCR	POW	29	1402	287	2224
#29-34 4303715340	06280	41S 24E 29	DSCR	POW	29	757	48	0
#30-32 4303715342	06280	41S 24E 30	DSCR	POW	29	588	1049	3744
#3-12 4303715620	06280	41S 24E 3	DSCR	POW	30	268	11	363
#9-34 4303715711	06280	41S 24E 9	DSCR	POW	30	45	46	9800
#10-12 4303715712	06280	41S 24E 10	DSCR	POW	30	45	23	1088
				TOTALS		5138	3480	41370

COMMENTS: Effective July 1, 1993, Phillips Petroleum Company has sold its interest in the Ratherford Unit to Mobil Exploration and Producing U.S., Incorporated, P. O. Box 633, Midland, Texas 79702. Mobil assumed operations on July 1, 1993.

I hereby certify that this report is true and complete to the best of my knowledge. Date: 8/11/93

Name and Signature: PAT KONKEL Pat Konkel Telephone Number: 505 599-3452

(6/93)

FORM 11

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

MONTHLY OIL AND GAS DISPOSITION REPORT

OPERATOR NAME AND ADDRESS:

~~BRIAN BERRY~~
~~M E P N A~~ MOBIL
~~POB 219031 1807A RENTWR~~ P.O. DRAWER G
DALLAS TX 75221-9031 CORTEZ, Co. 81321

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 7 / 93

AMENDED REPORT ☐ **(Highlight Changes)**

*931006 updated. fee

ENTITY NUMBER	PRODUCT	GRAVITY BTU	BEGINNING INVENTORY	VOLUME PRODUCED	DISPOSITIONS TRANSPORTED	DISPOSITIONS USED ON SITE	DISPOSITIONS FLARED/VENTED	DISPOSITIONS OTHER	ENDING INVENTORY
05980	OIL			177609	177609	0			
	GAS			72101	66216	5885			
11174	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
TOTALS				249710	243825	5885			

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SEP 13 1993
DIVISION OF
OIL, GAS & MINING

COMMENTS: PLEASE NOTE ADDRESS CHANGE. MOBIL ~~E&P~~ PRODUCTION REPORTS WILL BE COMPILED AND SENT FROM THE CORTEZ, Co. OFFICE IN THE FUTURE.

I hereby certify that this report is true and complete to the best of my knowledge.

Date: 9/6/93

Name and Signature: Lowell B Sheffield

Telephone Number: ~~303 565~~ 2212 ~~244 658 2528~~

(6/93)

FORM=NR0003.FRM 07/2

FORM 9

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION & SERIAL NO.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

1. OIL WELL ☐ GAS WELL ☐ OTHER

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

2. NAME OF OPERATOR: MOBIL OIL CORPORATION

8. FARM OR LEASE NAME:

3. ADDRESS OF OPERATOR: P. O. BOX 633 MIDLAND, TX 79702

RECEIVED SEP 13 1993

9. WELL NO.:

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface:

At proposed prod. zone:

DIVISION OF OIL, GAS & MINING

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA:

14. API NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY	13. STATE
		SAN JUAN	UTAH

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) CHANGE OF OPERATOR			
(Other)				(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			
APPROX. DATE WORK WILL START				DATE OF COMPLETION			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

* Must be accompanied by a cement verification report.

AS OF JULY1, 1993, MOBIL OIL CORPORATION IS THE OPERATOR OF THE RATHERFORD UNIT. ATTACHED ARE THE INDIVIDUAL WELLS.

18. I hereby certify that the foregoing is true and correct

SIGNED Shirley Todd TITLE ENV. & REG TECHNICIAN DATE 9-8-93

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

See Instructions On Reverse Side

(3/89)

12W-44	43-037-16405	14-20-603-246A	SEC. 12, T41S, R23E	SE/SE 660 FSL; 660 FEL
12W-44A	43-037-31543	14-20-603-246A	SEC. 12, T41S, R23E	SE/SE 807 FEL; 772 FSL
13-11W	43-037-31152	14-20-603-247A	SEC. 13, T41S, R23E	NW/NW 500 FNL; 660 FWL
13-12	43-037-31127	14-20-603-247A	SEC. 13, T41S, R23E	SW/NW 1705 FNL; 640 FWL
13W-13	43-037-15851	14-20-603-247A	SEC. 13, T41S, R23E	NW/SW 1980 FSL; 4620 FEL
13-14	43-037-31589	14-20-603-247A	SEC. 13, T41S, R23E	660 FSL; 660 FWL
13-21	43-037-31128	14-20-603-247A	SEC. 13, T41S, R23E	NE/NW 660 FNL; 1920 FWL
13W-22	43-037-15852	14-20-603-247A	SEC. 13, T41S, R23E	SE/NW 1988 FNL; 3300 FEL
13-23	43-037-31129	14-20-603-247A	SEC. 13, T41S, R23E	NE/SW 1980 FSL; 1930 FWL
~~13W-44~~	~~43-037-15853~~	~~14-20-603-247~~	~~SEC. 13, T41S, R23E~~	~~660 FSL; 3300 FEL~~
13W-32	43-037-16406	14-20-603-247A	SEC. 13, T41S, R23E	1881 FNL; 1979 FEL
13W-33	43-037-15855	14-20-603-247A	SEC. 13, T41S, R23E	NW/SE 1970 FSL; 1979 FEL
13W-34	43-037-31130	14-20-603-247A	SEC. 13, T41S, R23E	SW/SE 660 FSL; 1980 FEL
13-41	43-037-15856	14-20-603-247A	SEC. 13, T41S, R23E	NE/NE 660 FNL; 660 FEL
13W-42	43-037-15857	14-20-603-247A	SEC. 13, T41S, R23E	SE/NE 2139; 585 FEL
13-43	43-037-31131	14-20-603-247A	SEC. 13, T41S, R23E	NE/SE 1700 FSL; 960 FEL
13W-44	43-037-16407	14-20-603-247A	SEC. 13, T41S, R23E	SE/SE 635 FSL; 659 FEL
~~14-03~~	~~NA~~	~~14-20-603-4037~~	~~SEC. 11, T41S, R23E~~	~~SW/SW 660 FSL; 660 FEL~~
14-32	43-037-15858	14-20-603-247A	SEC. 14, T41S, R23E	2130 FNL; 1830 FEL
14-41	43-037-31623	14-20-603-247A	SEC. 14, T41S, R23E	NE/NE 521 FEL; 810 FNL
14W-42	43-037-15860	14-20-603-247A	SEC. 14, T41S, R23E	SE/NE 1976 FNL; 653 FEL
14W-43	43-037-16410	14-20-603-247A	SEC. 14, T41S, R23E	3300 FSL; 4770 FEL
14-33	43-037-15859	14-20-603-247	SEC. 14, T41S, R23E	2130 FSL; 1830 FEL
15-12	43-037-15715	14-20-603-355	SEC. 15, T41S, R24E	1820 FNL; 500 FWL
15W-21	43-037-16411	14-20-603-355	SEC. 15, T41S, R24E	660 FNL; 1820 FWL
15-22	43-037-30449	14-20-603-355	SEC. 15, T41S, R24E	SE/NW, 1980 FNL; 2050 FWL
15-32	43-037-15717	14-20-603-355A	SEC. 15, T41S, R24E	1980 FNL; 1980 FEL
15-33	43-037-15718	14-20-603-355	SEC. 15, T41S, R24E	NW/SE 1650 FSL; 1980 FEL
15-41	43-037-15719	14-20-603-355	SEC. 15, T41S, R24E	660 FNL; 660' FEL
15-42	43-037-30448	14-20-603-355	SEC. 15, T41S, R24E	SE/NE 2020 FNL; 820 FEL
16W-12	43-037-15720	14-20-603-355	SEC. 16, T41S, R24E	SW/NW 1880 FNL; 660 FWL
16-13	43-037-31168	14-20-603-355	SEC. 16, T41S, R24E	1980 FSL; 660 FWL
16W-14	43-037-15721	14-20-603-355	SEC. 16, T41S, R24E	SW/SW 660 FSL; 660 FWL
16W-21	43-037-16414	14-20-603-355	SEC. 16, T41S, R24E	NE/NW 660 FNL; 1880 FWL
16W-23	43-037-15722	14-20-603-355	SEC. 16, T41S, R24E	NE/SW 1980 FSL; 1980 FWL
16-32	43-037-15723	14-20-603-355	SEC. 16, T41S, R24E	1980 FNL; 1980' FEL
16-34	43-037-15724	14-20-603-355	SEC. 16, T41S, R24E	660 FNL; 1980' FEL
16-41	43-037-15725	14-20-603-355	SEC. 16, T41S, R24E	660 FNL; 660 FEL
16W-43	43-037-16415	14-20-603-355	SEC. 16, T41S, R24E	NE/SE 2140 FSL; 820 FEL
17-11	43-037-31169	14-20-603-353	SEC. 17, T41S, R24E	NW/NW 1075' FNL; 800' FWL
17W-12	43-037-15726	14-20-603-353	SEC. 17, T41S, R24E	SW/NW 1980' FNL; 510' FWL
17-13	43-037-31133	14-20-603-353	SEC. 17, T41S, R24E	NW/SW 2100' FSL; 660' FWL
17W-14	43-037-15727	14-20-603-353	SEC. 17, T41S, R24E	SW/SW 660' FSL; 660' FWL
17W-21	43-037-16416	14-20-603-353	SEC. 17, T41S, R24E	510' FNL; 1830' FWL
17-22	43-037-31170	14-20-603-353	SEC. 17, T41S, R24E	1980' FNL; 1980' FWL
17W-23	43-037-15728	14-20-603-353	SEC. 17, T41S, R24E	NE/SW 1980' FWL; 1880' FSL
17-31	43-037-31178	14-20-603-353	SEC. 17, T41S, R24E	NW/NE 500' FNL; 1980' FEL
17-32W	43-037-15729	14-20-603-353	SEC. 17, T41S, R24E	SW/NE 1830' FNL; 2030' FEL
17-33	43-037-31134	14-20-603-353	SEC. 17, T41S, R24E	NW/SE 1980' FSL; 1845' FEL
17-34W	43-037-15730	14-20-603-353	SEC. 17, T41S, R24E	SW/SE 560' FSL; 1880' FEL
17W-41	43-037-15731	14-20-603-353	SEC. 17, T41S, R24E	610' FNL; 510' FEL
17-42	43-037-31177	14-20-603-353	SEC. 17, T41S, R24E	SE/NE 1980; FNL, 660' FEL
17-44	43-037-15732	14-20-603-353	SEC. 17, T41S, R24E	660 FSL; 660' FEL
17W-43	43-037-16417	14-20-603-353	SEC. 17, T41S, R24E	NE/SE 1980' FSL; 660' FEL
18-11	43-037-15733	14-20-603-353	SEC. 18, T41S, R24E	NW/NW 720' FNL; 730' FWL
18-12W	43-037-31153	14-20-603-353	SEC. 18, T41S, R24E	SW/NW 1980' FNL; 560' FWL
18W-21	43-037-16418	14-20-603-353	SEC. 18, T41S, R24E	NE/NW 660' FNL; 1882' FWL
18-22	43-037-31236	14-20-603-353	SEC. 18, T41S, R24E	SW/NW 2200' FNL; 2210' FWL
18W-23	43-037-30244	14-20-603-353	SEC. 18, T41S, R24E	NE/SW 2385' FSL; 2040' FWL
18W-14	43-037-15735	14-20-603-353	SEC. 18, T41S, R24E	SW/SW 810' FSL; 600' FWL
18-24	43-037-31079	14-20-603-353	SEC. 18, T41S, R24E	SE/SW 760' FSL; 1980' FWL
18-31	43-037-31181	14-20-603-353	SEC. 18, T41S, R24E	NW/NE 795' FNL; 2090; FEL
~~18W-32~~	~~43-037-15736~~	~~14-20-603-353~~	~~SEC. 18, T41S, R24E~~	~~SW/NE 2140' FNL; 1830' FEL~~
18-33	43-037-31135	14-20-603-353	SEC. 18, T41S, R24E	NW/SE 1870' FSL; 1980' FEL
18-34W	43-037-15737	14-20-603-353	SEC. 18, T41S, R24E	SW/SE 780' FSL; 1860 FEL
18W-41	43-037-15738	14-20-603-353	SEC. 18, T41S, R24E	NE/NE 660' FNL; 660' FEL
18-42	43-037-31182	14-20-603-353	SEC. 18, T41S, R24E	SE/NE 2120' FNL; 745' FEL
18W-43	43-037-16419	14-20-603-353	SEC. 18, T41S, R24E	NE/SE 1980' FSL; 660' FEL
18-44	43-037-31045	14-20-603-353	SEC. 18, T41S, R24E	SE/SE 660' FSL; 660' FEL
19-11	43-037-31080	14-20-603-353	SEC. 19, T41S, R24E	NW/NW 660' FNL; 660' FWL
19-12	43-037-15739	14-20-603-353	SEC. 19, T41S, R24E	600' FWL; 1980' FNL
19-14	43-037-15740	14-20-603-353	SEC. 19, T41S, R24E	600' FSL; 660' FEL

Sept 29, 1993

TO: Lisha Cordova - Utah Mining Oil & Gas

FROM: Janice Easley
BLM Farmington, NM
505 599-6355

Here is copy of Rutherford Unit Successor Operator.

4 pages including this one.

Ratherford Unit (GC)

Navajo Area Office
P. O. Box 1060
Gallup, New Mexico 87305-1060

ARES/543

JUL 26 1993

Mr. G. D. Cox
Mobil Exploration and
Producing North America, Inc.
P. O. Box 633
Midland, Texas 79702

Dear Mr. Cox:

Enclosed for your information and use is the approved Designation of Operator between the Phillips Petroleum Company and Mobil Exploration and Producing North America, Inc. for the Ratherford Unit.

Please note that all other concerned parties will be furnished their copy of the approved document.

Sincerely,

ACTING Area Director

Enclosure

cc: Bureau of Land Management, Farmington District Office w/enc.
TNN, Director, Minerals Department w/enc.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

RECEIVED
BLM
93 JUL 27 AM 11:44
070 FARMINGTON, NM

DESIGNATION OF OPERATOR

Phillips Petroleum Company is, on the records of the Bureau of Indian Affairs, operator of the Ratherford Unit,

AREA OFFICE: Window Rock, Arizona
LEASE NO: Attached hereto as Exhibit "A"

and, pursuant to the terms of the Ratherford Unit Agreement, is resigning as Unit Operator effective July 1, 1993, and hereby designates

NAME: Mobil Exploration and Producing North America Inc., duly elected pursuant to the terms of the Ratherford Unit Agreement,

ADDRESS: P. O. Box 633, Midland, Texas 79702
Attn: G. D. Cox

as Operator and local agent, with full authority to act on behalf of the Ratherford Unit lessees in complying with the terms of all leases and regulations applicable thereto and on whom the authorized officer may serve written or oral instructions in securing compliance with the Operating Regulations (43 CFR 3160 and 25 CFR 211 and 212) with respect to (described acreage to which this designation is applicable):

Attached hereto as Exhibit "A"

Bond coverage under 25 CFR 211, 212 or 225 for lease activities conducted by the above named designated operator is under Bond Number 05202782 (attach copy). Evidence of bonding is required prior to the commencement of operations.

It is understood that this designation of operator does not relieve any lessee of responsibility for compliance with the terms of the leases and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the leases.

In case of default on the part of the designated operator, the lessees will make full and prompt compliance with all regulations, lease terms, stipulations, or orders of the Secretary of the Interior or his representative.

Attached is the appropriate documentation relevant to this document.

The designated operator agrees to promptly notify the authorized officer of any change in the operatorship of said Ratherford Unit.

Phillips Petroleum Company

June 17, 1993 By: M. B. [illegible] J.
Attorney-in-Fact

Mobil Exploration and Producing
North America Inc.

June 11, 1993 By: B. D. Martiny
Attorney-in-Fact B.D. MARTINY

[illegible] ACTING AREA DIRECTOR 7/9/93
APPROVED BY TITLE DATE

APPROVED PURSUANT, TO SECRETARIAL REDELEGATION ORDER 209 DM 8 AND 230 DM 3.

This form does not constitute an information collection as defined by 44 U.S.C. 3502 and therefore does not require OMB approval.

EXHIBIT "A"

ATTACHED TO AND MADE A PART OF DESIGNATION OF SUCCESSOR OPERATOR, RATHERFORD UNIT

EXHIBIT "C"

Revised as of September 29, 1992)
SCHEDULE OF TRACT PERCENTAGE PARTICIPATION

Tract Number	Description of Land	Serial Number and Effective Date of Lease	Tract Percentage Participation
1	S/2 Sec. 1, E/2 SE/4 Sec. 2, E/4 Sec. 11, and all of Sec. 12, T-41-S, R-23-E, S.L.M. San Juan County, Utah	14-20-603-246-A Oct. 5, 1953	11.0652565
2	SE/4 and W/2 SW/4 Sec. 5, the irregular SW/4 Sec. 6, and all of Sec. 7 and 8, T-41-S, R-24-E, San Juan County, Utah	14-20-603-368 Oct. 26, 1953	14.4159942
3	SW/4 of Sec. 4, T-41-S, R-24-E, San Juan County, Utah	14-20-603-5446 Sept. 1, 1959	.5763826
4	SE/4 Sec. 4, and NE/4 Sec. 9, T-41-S, R-24-E, San Juan County, Utah	14-20-603-4035 March 3, 1958	1.2587779
5	SW/4 of Sec. 3, T-41-S, R-24-E, S.L.M., San Juan County, Utah	14-20-603-5445 Sept. 3, 1959	.4667669
6	NW/4 of Sec. 9, T-41-S, R-24-E, S.L.M., San Juan County, Utah	14-20-603-5045 Feb. 4, 1959	1.0187043
7	NW/4, W/2 NE/4, and SW/4 Sec. 10, SE/4 Sec. 9, T-41-S, R-24-E, San Juan County, Utah	14-20-603-4043 Feb. 18, 1958	3.5097575
8	SW/4 Sec. 9, T-41-S, R-24-E, S.L.M. San Juan County, Utah	14-20-603-5046 Feb. 4, 1959	1.1141679
9	SE/4 Sec. 10 and S/2 SW/4 Sec. 11 T-41-S, R-24-E, San Juan County, Utah	14-20-603-4037 Feb. 14, 1958	2.6186804
10	All of Sec. 13, E/2 Sec. 14, and E/2 SE/4 and N/2 Sec. 24, T-41-S, R-23-E, S.L.M., San Juan County, Utah	14-20-603-247-A Oct. 5, 1953	10.3108861
11	Sections 17, 18, 19 and 20, T-41-S, R-24-E, San Juan County Utah	14-20-603-353 Oct. 27, 1953	27.3389265
12	Sections 15, 16, 21, and NW/4, and W/2 SW/4 Sec. 22, T-41-S, R-24-E, San Juan County, Utah	14-20-603-355 Oct. 27, 1953	14.2819339
13	W/2 Section 14, T-41-S, R-24-E, San Juan County, Utah	14-20-603-370 Oct. 26,1953	1.8500847
14	N/2 and SE/4, and E/2 SW/4 Sec. 29, NE/4 and E/2 SE/4 and E/2 W/2 irregular Sec. 30, and E/2 NE/4 Sec. 32, T-41-S, R-24-E, San Juan County, Utah	14-20-603-407 Dec. 10, 1953	6.9924969
15	NW/4 Sec. 28, T-41-S, R24-E San Juan County, Utah	14-20-603-409 Dec. 10, 1953	.9416393
16	SE/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6504 July 11, 1961	.5750254
17	NE/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6505 July 11, 1961	.5449292
18	NW/4 Sec. 3, T-41-S, R-24-E San Juan County, Utah	14-20-0603-6506 July 11, 1961	.5482788
19	NE/4 Sec. 4, T-41-S, R24-E San Juan County, Utah	14-20-0603-7171 June 11, 1962	.4720628
20	E/2 NW/4 Sec. 4, T-41-S, R-24-E San Juan County, Utah	14-20-0603-7172 June 11, 1962	.0992482
100% Indian Lands		TOTAL 12,909.74	100.0000000

Division of Oil, Gas and Mining

PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

[ ] Well File _____

_____

(Location) Sec___Twp___Rng___

(API No.) _____

[ ] Suspense

(Return Date) _____

(To - Initials) _____

[XX] Other

OPERATOR CHANGE

1. Date of Phone Call: 10-6-93 Time: 9:30

2. DOGM Employee (name) L. CORDOVA (Initiated Call [XX])

Talked to:

Name GLEN COX (Initiated Call [ ]) - Phone No. (915)688-2114

of (Company/Organization) MOBIL

3. Topic of Conversation: OPERATOR CHANGE FROM PHILLIPS TO MOBIL "RATHERFORD UNIT".

(NEED TO CONFIRM HOW OPERATOR WANTS THE WELLS SET UP - MEPNA AS PER BIA APPROVAL

OR MOBIL OIL CORPORATION AS PER SUNDRY DATED 9-8-93?)

4. Highlights of Conversation:

MR. COX CONFIRMED THAT THE WELLS SHOULD BE SET UNDER ACCOUNT N7370/MEPNA AS PER BIA APPROVAL, ALSO CONFIRMED THAT PRODUCTION & DISPOSITION REPORTS WILL NOW BE HANDLED OUT OF THEIR CORTEZ OFFICE RATHER THAN DALLAS.

MEPNA-

PO DRAWER G

CORTEZ, CO 81321

(303)565-2212

*ADDRESS CHANGE AFFECTS ALL WELLS CURRENTLY OPERATORED BY MEPNA, CURRENTLY REPORTED OUT OF DALLAS (MCELMO CREEK).

DIV OIL GAS & MINING

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

OCT 25 1993

OIL GAS & MINING

TRANSFER OF AUTHORITY TO INJECT - UIC FORM 5

Well name and number: _____

Field or Unit name: RATHERFORD UNIT API no. _____

Well location: QQ ____ section ___ township ___ range ___ county _____

Effective Date of Transfer: July 1, 1993

CURRENT OPERATOR

Transfer approved by:

Name Ed Hasely Company Phillips Petroleum Company

Signature Ed Hasely Address 5525 HWY. 64

Title Environmental Engineer Farmington, NM 87401

Date October 22, 1993 Phone (505) 599-3460

Comments:

NEW OPERATOR

Transfer approved by:

Name Shirley Todd Company Mobil Exploration & Producing North America

Signature Shirley Todd Address P O Box 633

Title Env. & Reg. Technician Midland, TX 79702

Date October 7, 1993 Phone (915) 688-2585

Comments:

(State use only)
Transfer approved by [illegible] Title UIC Manager

Approval Date 10-27-93

Lisha Cordova (801) 538-5340

(3/89)

BEFORE THE OIL AND GAS CONSERVATION COMMISSION OF THE STATE OF UTAH

APPLICATION OF PHILLIPS PETROLEUM COMPANY FOR THE APPROVAL OF THE UNIT OPERATIONS AND PRESSURE MAINTENANCE PROGRAM FOR THE RATHERFORD UNIT IN THE GREATER ANETH AREA, SAN JUAN COUNTY, UTAH	)	CAUSE NO. 63

ORDER

This Cause came on for hearing before the Oil and Gas Conservation Commission of the State of Utah at 10 o'clock a. m. on Wednesday, September 13, 1961, in the Crystal Room, Hotel Newhouse, Fourth South at Main Street, Salt Lake City, Utah, pursuant to notice duly and regularly given. The entire Commission, except Walter G. Mann, was present, Edward W. Clyde presiding. Appearances were made as follows: Cecil C. Hamilton, attorney, on behalf of Phillips Petroleum Company; Clair M. Senior, attorney, on behalf of Texaco, Inc.; Gordon Mayberry, attorney, on behalf of Continental Oil Company; R. R. Robison on behalf of Shell Oil Company. Others present included Carl Trawick, on behalf of United States Geological Survey; and J. R. White, on behalf of Texaco, Inc.

Evidence in support of the application was introduced by Phillips Petroleum Company, the applicant and Unit Operator of the Ratherford Unit, which embraces as the unit area the following described land in San Juan County, State of Utah, to wit:

TOWNSHIP 41 SOUTH, RANGE 23 EAST, SLBM

Section 1:	All	Sections 12 and 13:	All
Section 2:	S/2	Section 14:	S/2
Section 11:	S/2	Section 24:	All

TOWNSHIP 41 SOUTH, RANGE 24 EAST, SLBM

Section 3:	SW/4	Sections 15 through 21:	All
Section 4:	S/2	Section 22:	NW/4 and W/2 of the SW/4
Sections 5 through 9:	All		
Section 10:	S/2 and NW/4 and W/2 of NE/4	Section 23:	NE/4 and W/2 of NE/4 and W/2 of SW/
Section 11:	S/2 of SW/4		
Section 14:	W/2	Section 29 and 30:	All
		Section 31:	N/2
		Section 32:	W/2

R. R. Robison on behalf of Shell Oil Company stated that (as contemplated by paragraph No. 5 of the Commission's order of February 24, 1959, in Cause No. 17 authorizing the drilling of certain test wells) Shell would submit to the Commission, as arbiter, the question as between Shell and Superior Oil Company

of the monetary value, if any, to be attributed to three test wells drilled within the Ratherford Unit area pursuant to said order of February 24, 1959.

No objection to the granting of the application was filed or expressed. The Shell Oil Company, Texaco, Inc. and Continental Oil Company expressed their support of the application of Phillips Petroleum Company.

FINDINGS OF FACT

The Commission finds that:

1. The unitized operation of the Ratherford Unit Area will enable pressure maintenance operations to be initiated and permit such Area to be operated in a manner which will prevent waste, protect correlative rights and result in greater ultimate recovery of oil and gas.

2. The Ratherford Unit Agreement has been approved by the various signatory parties as fair, reasonable and acceptable.

3. The water injection pressure maintenance program proposed by the applicant appears to be proper and designed to result in the greatest economic recovery of oil and gas to the end that all concerned, including the general public, may realize and enjoy the greatest good from the oil and gas resources of the unitized lands.

O R D E R

THEREFORE, IT IS ORDERED BY THE COMMISSION, and subject to its continuing jurisdiction, that:

1. Unit operation of the Ratherford Unit Area under the Ratherford Unit Agreement is approved.

2. The plan and program of water injection pressure maintenance operations proposed by applicant in its application filed herein should be and the same is hereby approved and the unit operator is authorized to proceed with and under such plan and program as soon as the Ratherford Unit Agreement becomes effective and operative.

3. If, at any time or from time to time, it appears necessary or desirable to the unit operator to alter or modify the hereby approved plan of pressure maintenance, any such alteration or modification shall be submitted for

and shall be subject to approval by the Commission or its delegated representative, which approval may be given without notice or hearing, unless otherwise ordered or directed by the Commission.

Dated this 13th day of September, 1961.

THE OIL AND GAS CONSERVATION
COMMISSION OF THE STATE OF UTAH

Edward W. Clyde, Commissioner presiding

C. R. Henderson, Chairman

M. V. Hatch, Commissioner

C. S. Thomson, Commissioner

Walter G. Mann, Commissioner

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:
1-~~LEC~~ 7-SJ
2-~~DTS~~ 8-FILE
3-VLC
4-RJF
5-~~LEC~~
6-RL

Attach all documentation received by the division regarding this change.
Initial each listed item when completed. Write N/A if item is not applicable.

☒ Change of Operator (well sold) ☐ Designation of Agent
☐ Designation of Operator ☐ Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 7-1-93)

TO (new operator) M E P N A
(address) PO DRAWER G
CORTEZ, CO 81321
GLEN COX (915)688-2114
phone (303) 565-2212
account no. N7370

FROM (former operator) PHILLIPS PETROLEUM COMPANY
(address) 5525 HWY 64 NBU 3004
FARMINGTON, NM 87401
PAT KONKEL
phone (505) 599-3452
account no. N0772(A)

Well(s) (attach additional page if needed): *RATHERFORD UNIT (NAVAJO)

Name: **SEE ATTACHED**	API: 43037-15860	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:

OPERATOR CHANGE DOCUMENTATION

Lec 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). (Req. 8-20-93) (6/93 Prod. Rpt. 8-16-93)

Lec 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). (Req. 8-31-93) (Rec'd 9-14-93)

N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: _____.

Lec 4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of Federal and Indian well operator changes should take place prior to completion of steps 5 through 9 below.

Lec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (O&G wells 10-6-93) (WIW's 10-26-93)

Lec 6. Cardex file has been updated for each well listed above. (O&G wells 10-6-93) (WIW's 10-26-93)

Lec 7. Well file labels have been updated for each well listed above. (O&G wells 10-6-93) (WIW's 10-26-93)

Lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (10-6-93)

Lec 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

– OVER –

PERATOR CHANGE WORKSHEET (CONTINUED) Initial each item when completed. Write N/A if item is not applicable.

NTITY REVIEW

JC 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ____ (If entity assignments were changed, attach copies of Form 6, Entity Action Form).

N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

OND VERIFICATION (Fee wells only)

JRC/N/A 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.

__ 2. A copy of this form has been placed in the new and former operators' bond files.

__ 3. The former operator has requested a release of liability from their bond (yes/no) ___. Today's date _____ 19___. If yes, division response was made by letter dated _____ 19___.

EASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

N/A 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated _____ 19___, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
VLC 11-10-93

N/A 2. Copies of documents have been sent to State Lands for changes involving State leases.

ILMING

__ 1. All attachments to this form have been microfilmed. Date: 11-17 1993.

ILING

__ 1. Copies of all attachments to this form have been filed in each well file.

__ 2. The original of this form and the original attachments have been filed in the Operator Change file.

OMMENTS

931006 BIA/Bhm Approved 7-9-93.

E71/34-35

Division of Oil, Gas and Mining

PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

[ ] Well File

(Location) Sec___ Twp___ Rng___

(API No.)

[ ] Suspense

(Return Date)

(To - Initials)

[XXX] Other

OPER NM CHG

1. Date of Phone Call: 8-3-95 Time:

2. DOGM Employee (name) L. CORDOVA (Initiated Call [ ])
   Talked to:

   Name R. J. FIRTH (Initiated Call [XX]) - Phone No. ( )

   of (Company/Organization)

3. Topic of Conversation: M E P N A / N7370

4. Highlights of Conversation:

OPERATOR NAME IS BEING CHANGED FROM M E P N A (MOBIL EXPLORATION AND PRODUCING NORTH AMERICA INC) TO MOBIL EXPLOR & PROD. THE NAME CHANGE IS BEING DONE AT THIS TIME TO ALLEVIATE CONFUSION, BOTH IN HOUSE AND AMONGST THE GENERAL PUBLIC.

*SUPERIOR OIL COMPANY MERGED INTO M E P N A 4-24-86 (SEE ATTACHED).

STATE OF UTAH
INVENTORY OF INJECTION WELLS

OPERATOR	API NO.	WELL	TNS	RGE	SE	WELLTYPE	INDIAN COUNT
MEPNA (MOBIL	43-037-15506	L-21	41S	25E	18	INJW	Y
MEPNA (MOBIL	43-037-16358	K-24	41S	25E	18	INJW	Y
MEPNA (MOBIL	43-037-30400	K-22X	41S	25E	18	INJI	Y
MEPNA (MOBIL	43-037-15499	J-21	41S	25E	18	INJW	Y
MEPNA (MOBIL	43-037-15508	L-25	41S	25E	19	INJW	Y
MEPNA (MOBIL	43-037-15839	1W24	41S	23E	1	INJW	Y
MEPNA (MOBIL	43-037-15838	1W13	41S	23E	1	INJW	Y
MEPNA (MOBIL	43-037-16386	2W44	41S	23E	2	INJW	Y
MEPNA (MOBIL	43-037-15842	11W44	41S	23E	11	INJW	Y
MEPNA (MOBIL	43-037-15841	11W42	41S	23E	11	INJW	Y
MEPNA (MOBIL	43-037-15848	12W33	41S	23E	12	INJW	Y
MEPNA (MOBIL	43-037-15850	12W42	41S	23E	12	INJW	Y
MEPNA (MOBIL	43-037-15847	12W31	41S	23E	12	INJW	Y
MEPNA (MOBIL	43-037-16404	12W13	41S	23E	12	INJW	Y
MEPNA (MOBIL	43-037-15845	12W22	41S	23E	12	INJW	Y
MEPNA (MOBIL	43-037-15843	12W11	41S	23E	12	INJW	Y
MEPNA (MOBIL	43-037-31151	12W24	41S	23E	12	INJW	Y
MEPNA (MOBIL	43-037-31543	RATERFORD 12	41S	23E	12	INJW	Y
MEPNA (MOBIL	43-037-15854	13W31	41S	23E	13	INJW	Y
MEPNA (MOBIL	43-037-15851	13W13	41S	23E	13	INJW	Y
MEPNA (MOBIL	43-037-15857	13W42	41S	23E	13	INJW	Y
MEPNA (MOBIL	43-037-16407	13W44	41S	23E	13	INJW	Y
MEPNA (MOBIL	43-037-15855	13W33	41S	23E	13	INJW	Y
MEPNA (MOBIL	43-037-31152	13W11	41S	23E	13	INJW	Y
MEPNA (MOBIL	43-037-15852	13W22	41S	23E	13	INJW	Y
MEPNA (MOBIL	43-037-15853	13W24	41S	23E	13	INJW	Y
MEPNA (MOBIL	43-037-16410	14W43	41S	23E	14	INJI	Y
MEPNA (MOBIL	43-037-15860	14W43	41S	23E	14	INJW	Y
MEPNA (MOBIL	43-037-15863	24W42	41S	23E	24	INJW	Y
MEPNA (MOBIL	43-037-15862	24W31	41S	23E	24	INJW	Y
MEPNA (MOBIL	43-037-15984	6W14	41S	24E	6	INJW	Y
MEPNA (MOBIL	43-037-15988	7W32	41S	24E	7	INJW	Y
MEPNA (MOBIL	43-037-15990	7W41	41S	24E	7	INJW	Y
MEPNA (MOBIL	43-037-16394	7W21	41S	24E	7	INJW	Y
MEPNA (MOBIL	43-037-15985	7W12	41S	24E	7	INJW	Y
MEPNA (MOBIL	43-037-15989	7W34	41S	24E	7	INJW	Y
MEPNA (MOBIL	43-037-15986	7W14	41S	24E	7	INJW	Y
MEPNA (MOBIL	43-037-15987	7W23	41S	24E	7	INJW	Y
MEPNA (MOBIL	43-037-16395	7W43	41S	24E	7	INJW	Y
MEPNA (MOBIL	43-037-16396	8W43	41S	24E	8	INJI	Y
MEPNA (MOBIL	43-037-15992	8W14	41S	24E	8	INJW	Y
MEPNA (MOBIL	43-037-16398	9W23	41S	24E	9	INJW	Y
MEPNA (MOBIL	43-037-16400	9W43	41S	24E	9	INJI	Y
MEPNA (MOBIL	43-037-16397	9W21	41S	24E	9	INJW	Y
MEPNA (MOBIL	43-037-16402	10W23	41S	24E	10	INJW	Y
MEPNA (MOBIL	43-037-16401	10W21	41S	24E	10	INJI	Y
MEPNA (MOBIL	43-037-16403	10W43	41S	24E	10	INJW	Y
MEPNA (MOBIL	43-037-16413	15W43	41S	24E	15	INJI	Y
MEPNA (MOBIL	43-037-16411	15W21	41S	24E	15	INJW	Y
MEPNA (MOBIL	43-037-16412	15W23	41S	24E	15	INJI	Y
MEPNA (MOBIL	43-037-16415	16W43	41S	24E	16	INJW	Y
MEPNA (MOBIL	43-037-15720	16W12	41S	24E	16	INJW	Y
MEPNA (MOBIL	43-037-15721	16W14	41S	24E	16	INJW	Y

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:

1-LEC	7-PL
2-LWP	8-SJ
3-~~DTS~~	9-FILE
4-VLC	
5-RJF	
6-LWP	

Attach all documentation received by the division regarding this change.
Initial each listed item when completed. Write N/A if item is not applicable.

☐ Change of Operator (well sold) ☐ Designation of Agent
☐ Designation of Operator XXX Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 8-2-95)

TO (new operator) **MOBIL EXPLOR & PROD**	FROM (former operator) **M E P N A**
(address) **C/O MOBIL OIL CORP**	(address) **C/O MOBIL OIL CORP**
PO DRAWER G	**PO DRAWER G**
CORTEZ CO 81321	**CORTEZ CO 81321**
phone (303) 564-5212	phone (303)564-5212
account no. N7370	account no. N7370

Well(s) (attach additional page if needed):

Name: **** SEE ATTACHED ****	API: 037 15860	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:

OPERATOR CHANGE DOCUMENTATION

N/A 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form).

N/A 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form).

N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: _____.

N/A 4. **(For Indian and Federal Wells ONLY)** The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.

Lec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (8-3-95)

LWP 6. Cardex file has been updated for each well listed above. 8-31-95

LWP 7. Well file labels have been updated for each well listed above. 9-28-95

lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (8-3-95)

lec 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

– OVER –

OPERATOR CHANGE WORKSHEET (CONTINUED) Initial each item when completed. Write N/A if item is not applicable.

ENTITY REVIEW

Lec 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ___ (If entity assignments were changed, attach copies of Form 6, Entity Action Form).

N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only) * No Fee Lease Wells at this time!

N/A/Lec 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.

___ 2. A copy of this form has been placed in the new and former operators' bond files.

___ 3. The former operator has requested a release of liability from their bond (yes/no) ___. Today's date _____ 19___. If yes, division response was made by letter dated _____ 19___.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

N/A 1. (Rule R615-2-10) The former operator/lessee of any **fee lease** well listed above has been notified by letter dated _____ 19___, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
UTS 8/5/FS

N/A 2. Copies of documents have been sent to State Lands for changes involving **State leases.**

FILMING

✓ 1. All attachments to this form have been microfilmed. Date: October 4 1995.

FILING

___ 1. Copies of all attachments to this form have been filed in each well file.

___ 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

950803 UIC F5/Not necessary!

WE71/34-35

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No. 14-20-603-
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No. 14-W-42
9. API Well No. 43-037-15860
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other INJECTOR / SIDETRACT
2. Name of Operator: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.
3. Address and Telephone No.: P.O. Box 633, Midland, TX 79702 915-688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description):
1976' FNL 653' FEL
SEC.14, T41S, R23E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	[X] Other SIDETRACK	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

LATERAL #1 2795' SOUTH & 2106' EAST FROM SURFACE SPOT ZONE 1d-1c-1b.
LATERAL #2 1906' SOUTH & 2935' EAST FROM SURFACE SPOT ZONE 1a

861 642
680 a2 895

SEE ATTACHMENTS

577 176 FSL
1499 457 FWL 13

1447 441 FSL
2313 705 FWL 13

RECEIVED
FEB 03 1997
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed [signature] Title ENV. & REG. TECHNICIAN Date 1-22-97

(This space for Federal or State office use)
Approved by ______ Title ______ Date ______
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Ratherford Unit Well #14-42
Multilateral Horizontal Drilling Procedure

The objective of this procedure is to prepare this wellbore for sidetracking, sidetrack the subject well and drill one horizontal lateral (3500 ft).

1. Prepare location and dig working pit.

2. MIRU WSU, reverse unit, and H_2S equipment. Bullhead kill weight fluid down tubing.

3. Release packer, and pick up on wellhead to remove. ND wellhead and NU BOP's. Pressure test BOP's.

4. Continue to POH with tubing.

5. TIH with full gauge bit and casing scraper to PBTD. TOH with bit and scraper.

6. Ensure well will circulate, and set CIBP above openhole @ 5300'. **Pressure test casing to 1000 psi.**

7. Mill section of casing from approximately 5105-5145'.

8. Spot kickoff plug from 5000-5300'. POH and PU bit to dress of plug. Dress off plug to 5100'.

9. RU wireline and run gyro survey of hole. POH w/ gyro and continue to dress off plug to **KOP @ 5110'**.

10. PU RTBP and set at 5000'. POH w/ tbg and ND BOP's. RDMO WSU.

11. MIRU 24 hr WSU. NU BOP's and test to rated working pressure.

12. PU tubing, drill collars, and drill pipe in derrick and run in hole. Latch onto RTBP and release, then POH.

13. RIH with MWD and directional motors to drill curve. Use the gyro to drill with until the inclination dictates that the gyro must be pulled.

14. Continue drilling the curve using the MWD.

15. POH once curve is finished and PU lateral motor to drill the lateral using MWD.

16. Once lateral TD is reached, POH w/ directional equipment.

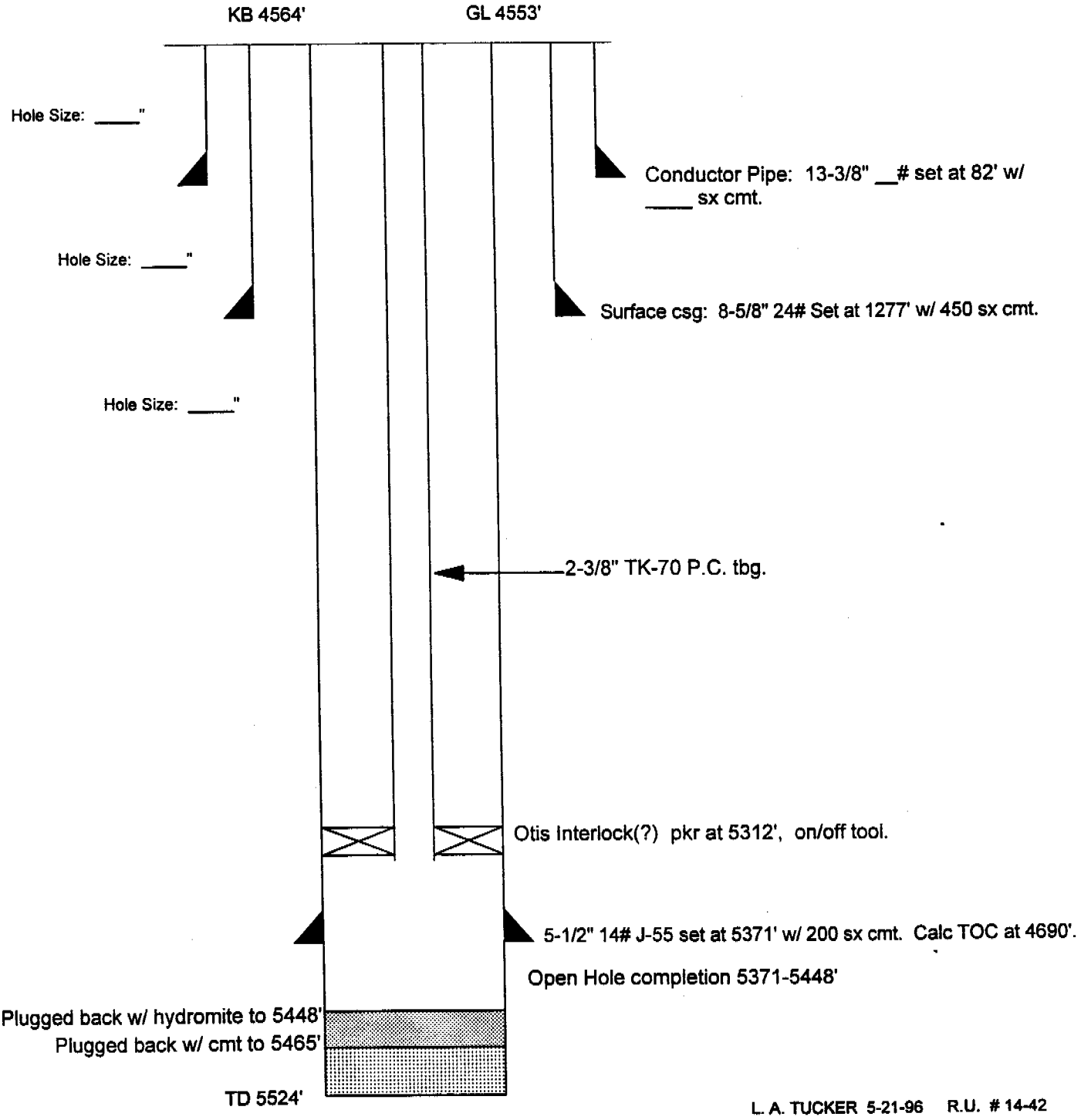
17. PU RTBP and set @5000'. RDMO for WSU to complete well.

RATHERFORD UNIT # 14-42

GREATER ANETH FIELD
1976' FNL & 653' FEL
SEC 14-T41S-R23E
SAN JUAN COUNTY, UTAH
API 43-037-15860
PRISM 0043023

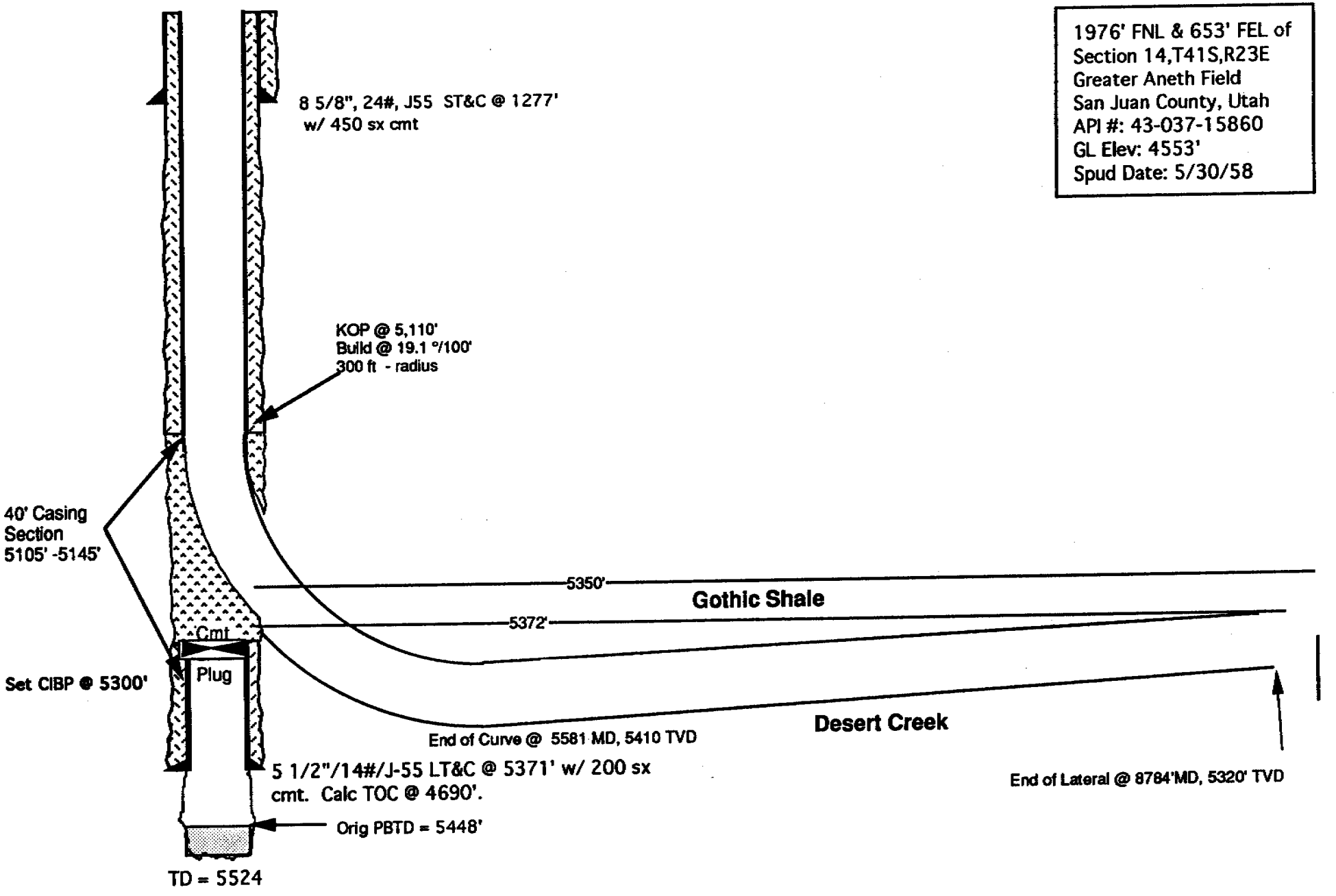
INJECTOR

Capacities:	bbl/ft	gal/ft	cuft/ft
2-7/8" 6.5#	.00579	.2431	.0325
5-1/2" 14#	.0244	1.0249	.1370
2-7/8x5.5"14#	.0164	.6877	
.0919			



L. A. TUCKER 5-21-96 R.U. # 14-42

PROPOSED CONDITION
Ratherford Unit #14-42



Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

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Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

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6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
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2. Name of Operator: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.
3. Address and Telephone No.: P.O. Box 633, Midland, TX 79702 915-688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 1976' FNL 653' FEL SEC.14, T41S, R23E

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TYPE OF SUBMISSION	TYPE OF ACTION	
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☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	[X] Other SIDETRACK	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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LATERAL #1 2795' SOUTH & 2106' EAST FROM SURFACE SPOT ZONE 1d-1c-1b.
LATERAL #2 1906' SOUTH & 2935' EAST FROM SURFACE SPOT ZONE 1a

SEE ATTACHMENTS

RECEIVED
FEB 03 1997
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Haley Hanahano Title ENV. & REG. TECHNICIAN Date 1-22-97

(This space for Federal or State office use)
Approved by _____ Title _____ Date 2/10/97
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 02/03/97

API NO. ASSIGNED: 43-037-15860

WELL NAME: RU 14-W-42 MULTI LEG
OPERATOR: MOBIL EXPL & PROD (N7370)

PROPOSED LOCATION:
SENE 14 - T41S - R23E
SURFACE: 1976-FNL-0653-FEL
BOTTOM: 1447-FSL-2313-FWL
SAN JUAN COUNTY
GREATER ANETH FIELD (365)

LEASE TYPE: IND
LEASE NUMBER: 14-20-603-

PROPOSED PRODUCING FORMATION: DSCR

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

✓ Plat
✓ Bond: Federal [✓] State [] Fee []
(Number _____)
N Potash (Y/N)
N Oil shale (Y/N)
✓ Water permit
(Number NAVAJO ALLOCATION)
N RDCC Review (Y/N)
(Date: _____)

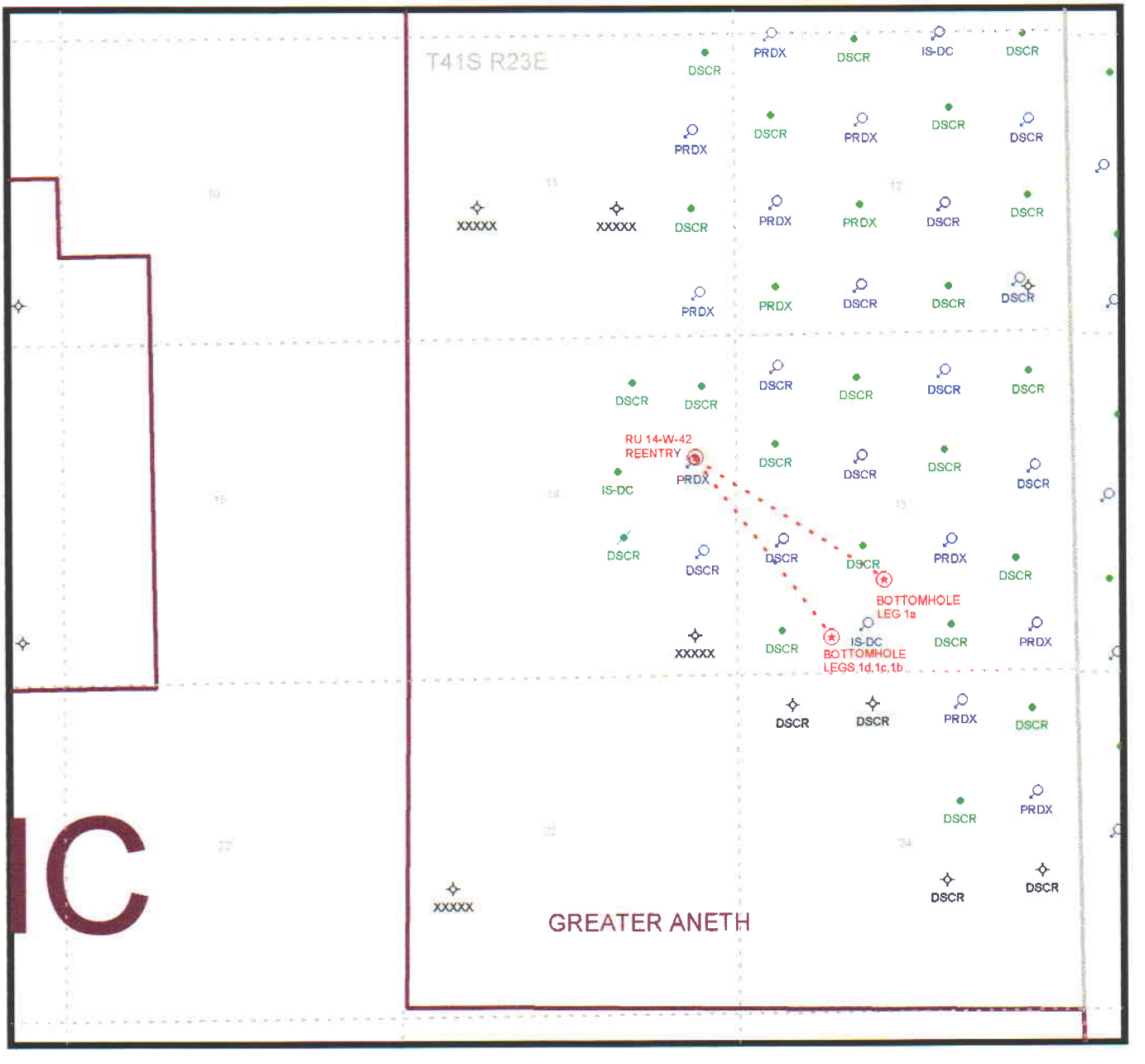
LOCATION AND SITING:

✓ R649-2-3. Unit: RATHER FORD UNIT
___ R649-3-2. General.
___ R649-3-3. Exception.
___ Drilling Unit.
Board Cause no: _____
Date: _____

COMMENTS: _____

STIPULATIONS: _____

OPERATOR: MOBIL
FIELD: GREATER ANETH (365)
SEC, TWP, RNG: 13 & 14, 41S, 23E
COUNTY: SAN JUAN
UAC: R649-2-3 RATHERFORD UNIT



PREPARED:
DATE: 7-FEB-97

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

February 10, 1997

Mobil Exploration & Producing
P.O. Box 633
Midland, Texas 79702

Re: Ratherford Unit 14-W-42 (Re-entry) Well, 1976' FNL, 653' FEL, SE NE, Sec. 14, T. 41 S., R. 23 E., San Juan County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to re-enter and drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-037-15860.

Sincerely,

R. J. Firth
Associate Director

lwp
Enclosures
cc: San Juan County Assessor
Bureau of Land Management, Moab District Office

Operator: Mobil Exploration & Producing

Well Name & Number: Ratherford Unit 14-W-42 (Re-entry)

API Number: 43-037-15860

Lease: 14-20-603

Location: SE NE Sec. 14 T. 41 S. R. 23 E.

Conditions of Approval

1. General
   Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

2. Notification Requirements
   Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jimmie Thompson at (801)538-5336.

   Notify the Division prior to commencing operations to plug and abandon the well. Contact R. J. Firth (801)538-5274 or Mike Hebertson at (801)538-5333.

3. Reporting Requirements
   All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. In accordance with Utah Admin. R. 649-3-11, Directional Drilling, submittal of a complete angular deviation and directional survey report is required.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: MOBIL E & P

Well Name: RATHERFORD UNIT 14-w-42 (RE-ENTRY)

Api No. 43-037-15860

Section: 14 Township: 41S Range: 23E County: SAN JUAN

Drilling Contractor BIG "A"

Rig # 25

SPUDDED:

Date 4/30/97

Time

How ROTARY

Drilling will commence

Reported by BENNY BRIGGS

Telephone # 1-801-651-3473

Date: 4/30/97 Signed: JLT

ROCKY MOUNTAIN GEO-ENGINEERING
Well Logging • Consulting Geology • Coal Bed Methane Services • Computerized Logging Equipment & Software
ROCKY MOUNTAIN GEO-ENGINEERING CORP.
2450 INDUSTRIAL BLVD. • GRAND JUNCTION, CO 81505
(970) 243-3044 • (FAX) 241-1085

Tuesday, May 20, 1997

Division of Oil & Gas Mining
State of Utah
355 W. North, Suite 350
Salt Lake City, UT 84180-1203

Re: Ratherford Unit 14-42 Lateral
Sec. 14, T41S, R23E
San Juan County, Utah

43 037 15860
DRL
DEVE
1976FUL 065352L

Dear Sirs:

Enclosed is the final computer colored log for the above referenced well.

We appreciate the opportunity to be of service to you and look forward to working with you again in the near future.

If you have any questions regarding the enclosed data, please contact us.

Sincerely,

Bill Nagel

Bill Nagel
Senior Geologist

BN/dn

Enc. 1 Final Computer Colored Log and Geology Report

cc Letter Only; Dana Larson; Mobil Oil; Midland, TX

MOBIL

RATHERFORD UNIT #14-42
HORIZONTAL LATERAL
UPPER 1-B & 1-A
POROSITY BENCH DESERT CREEK
SECTION 13, T41S, R23E
SAN JUAN, UTAH

GEOLOGY REPORT
by
DAVE MEADE
ROCKY MOUNTAIN GEO-ENGINEERING CORP.
GRAND JUNCTION, COLORADO
(970) 243-3044

TABLE OF CONTENTS

WELL SUMMARY

OPERATOR:	MOBIL EXPLORATION & PRODUCTION U.S. INC.
NAME:	RATHERFORD UNIT #14-42 SE UPPER HORIZONTAL LATERAL IN 1-B & 1-A UPPER POROSITY BENCHS, DESERT CREEK
LOCATION:	SECTION 13, T41S, R23E
COUNTY/STATE:	SAN JUAN, UTAH
ELEVATION:	KB:4748' GL:4760'
SPUD DATE:	4/18/97
COMPLETION DATE:	4/29/97
DRILLING ENGINEER:	BENNY BRIGGS / SIMON BARARA
WELLSITE GEOLOGY:	DAVE MEADE / JAY WARNER
MUDLOGGING:	
ENGINEERS	DAVE MEADE / JAY WARNER
CONTRACTOR:	BIG "A" RIG 25
TOOLPUSHER:	J. DEES / MIKE SMITH
HOLE SIZE:	4 3/4"
CASING RECORD:	SIDETRACK IN WINDOW AT 5382' MEASURED DEPTH
DRILLING MUD:	M-I
ENGINEER:	RON WESTENBERG/ DANNE BEASON
MUD TYPE:	FRESH WATER / POLYMER SWEEPS
DIRECTIONAL DRILLING CO:	SPEERY-SUN
ELECTICAL LOGGING:	NA
TOTAL DEPTH:	8860' MEASURED DEPTH TVD-5407'
STATUS:	TOH & LAY DOWN TOOLS - PREPARE TO MOVE RIG

DRILLING CHRONOLOGY
RATHERFORD UNIT #14-42
SE UPPER 1-B/A HORIZONTAL LATERAL

DATE	DEPTH	DAILY	ACTIVITY
5/01/97	5135'	0'	P.U. & STRAP DRL PIPE-TIH-LATCH PLUG & SHEAR OFF-L.D. 20 JTS DRL PIPE-TOH-L.D. BRIDGE PLUG TOOLS-RIG UP WIRE LINE - RUN & SET PACKER W/ WIRELINE @ 5151'-P.U. MULE SHOE & ANCHOR-TIH-DISPLACE W/H_2O-SET PACKER-RUN GYRO & ORIENT-PULL GYRO & RIG DOWN WIRELINE-TOH-L. D. LATCH ASSEMBLY-P. U. LATCH ASSEMBLY & WHIPSTOCK-ORIENT & TIH-SHEAR OFF WHIPSTOCK
5/02/97	5135'	11'	RUN STARTER MILL-5135'-5137'-CIR-TOH -P.U. WINDOW MILL-TIH-MILL 5135'-5142'-PUMP SWEEPS & CIR OUT-LAY DOWN 30 JTS DRL PIPE-TOH-L.D. MILLS-PICK UP BIT & CURVE ASSEMBLY- TIH-P.U. 14 JTS DRL PIPE-TIH-BREAK CIR-RIG UP WIRELINE & RUN GYRO-TIME DRLG 5142'-5146'
5/03/97	5146'	249'	DIR DRLG & SURVEYS-PULL & L.D. GYRO-RIG DOWN WIRELINE- DIRL DRLG & SURVEYS
5/04/97	5395'	230'	DIRL DRLG & SURVEYS- CIR BTMS UP @ 5547-TOH-LAY DOWN CURVE ASSEMBLY-PICK UP LATERAL BHA & BIT-TIH-DIR DRLG & SURVEYS
5/05/97	5625'	610'	DIR DRLG & SURVEYS-SWITCH TO SKIMMER PITS-DIR DLRG & SURVEYS
5/06/97	6235'	615'	DIR DRLG & SURVEYS-WORK PIPE TO KILL ANGLE-DIR DRLG & SURVEYS-WORK PIPE TO KILL ANGLE-DIR DRLG & SURVEY
5/07/97	6850'	561'	DIR DRLG & SURVEYS-CIR OUT SPLS @ 7411'-LAY DOWN 51 JTS DRL PIPE-TOH TO WINDOW-DISPLACE HOLE W/10# BRINE WATER -12 ppm H_2S -WELL FLOWING W/ SIP 500psi ON MANIFOLD-CIR. 10# BRINE THRU CHOKE-15ppm H_2S
5/08/97	7411'	179'	W/SIP 225psi IN 15 MIN. & 250psi IN 1 HR-W/O 12# MUD-BULLHEAD 12# MUD($CaCo_3$)-TOH-SHUT IN WELL-L.D. MUD MOTOR & MWD-P.U. MWD & NEW MUD MOTOR NEW BIT-W.O. 12# MUD-BULLHEAD 12# MUD-TIH W/BHA & P.U. 50 JTS NEW PH6 TUBING-TIH
5/09/97	7590'	501'	DIR DRLG & SURVEYS (WELL FLOWING)
5/10/97	8091'	406'	DIR DRIG & SURVEYS (WELL FLOWING +/- 40 BBLS/HR)-LAY DOWN 20 JTS DRL PIPE W/SWIVEL & CHK FOR FLOW-TIH 20 JTS-DIR DRLG & SURVEYS

DRILLING CHRONOLOGY
RATHERFORD UNIT #14-42
SE UPPER 1-B/A HORIZONTAL LATERAL

DATE	DEPTH	DAILY	ACTIVITY
5/11/97	8497'	363'	DIR DRLG & SURVEYS-SHORT TRIP 5 STDS W/SWIVEL-DIR DLRG & SURVEYS-CIR BTMS UP @ 8860'-LD 7 JTS DRL PIPE-(WELL FLOWING +/- 28BBLS / HR) TOH
5/12/97	8860'	0'	TOH 56 STDS TO WINDOW-SHUT IN WELL & CHK PRES-PUMP 10# BRINE WATER & DISPLACE WATER-SHUT IN WELL &
5/12/97 CON'T	8860'	0'	CHK PRES-PUMP 25 BBLS WATER-PUMP 47 BBLS CaCo3-TOH-L.D. MWD & MUD MOTOR-P.U. BRIDGE PLUG-TOH W/BRIDGE PLUG-CHK FOR FLOW-PUMP BRINE WATER-TOH-LAY DOWN DRLG PIPE & COLLARS-START RIGGING DOWN RIG

DAILY ACTIVITY

Operator: MOBIL
Well Name: RATHERFORD UNIT #14-42 SE UPPER 1-B/A HORIZONTAL LATERAL

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
5/01/97	5135'	0'			
5/02/97	5135'	11'			
5/03/97	5146'	249'			
5/04/97	5587'	230'			
5/05/97	5947'	610'			
5/06/97	6235'	615'			
5/07/97	6890'	561'			
5/08/97	7411'	179'			
5/09/97	7590'	501'			
5/10/97	8091'	406'			
5/11/97	8497'	363'			
5/12/97	8860'	0'			

BIT RECORD

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #14-42 SE UPPER 1-B/A HORIZONTAL LATERAL

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1	4 3/4"	STC	MF-3P	5142'/ 5547'	405'	32.5	12.5
#2	4 3/4"	HTC	STR-30	5547'/ 7411'	1864'	70	26.6
#3	4 3/4"	HTC	STR-30	7411'/ 8860'	1449'	71	20.4

JU

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (UTAH)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/RU 14-42

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5100.00	0.44	244.11	5099.10	29.50 N	61.63 W	-67.76	0.00
5135.00	0.34	218.24	5134.10	29.36 N	61.82 W	-67.83	0.57
5143.00	3.38	135.91	5142.09	29.17 N	61.67 W	-67.61	41.89
5153.00	5.20	134.82	5152.07	28.64 N	61.14 W	-66.88	18.22
5163.00	7.50	133.73	5162.00	27.87 N	60.35 W	-65.79	23.03
5173.00	9.90	132.64	5171.89	26.84 N	59.24 W	-64.30	24.06
5183.00	12.00	131.55	5181.71	25.57 N	57.83 W	-62.43	21.10
5193.00	14.30	130.46	5191.44	24.08 N	56.11 W	-60.17	23.13
5203.00	16.80	129.37	5201.08	22.36 N	54.06 W	-57.51	25.17
5213.00	19.50	128.28	5210.58	20.41 N	51.63 W	-54.41	27.21
5223.00	22.80	127.20	5219.90	18.20 N	48.77 W	-50.82	33.23
5233.00	25.80	129.10	5229.02	15.66 N	45.54 W	-46.72	31.00
5243.00	28.70	131.20	5237.91	12.70 N	42.04 W	-42.18	30.55
5253.00	31.40	133.50	5246.56	9.32 N	38.35 W	-37.24	29.35
5263.00	33.90	135.90	5254.98	5.53 N	34.52 W	-31.96	28.15
5273.00	36.10	138.60	5263.17	1.31 N	30.63 W	-26.40	26.90
5283.00	38.60	138.90	5271.12	3.25 S	26.63 W	-20.56	25.07
5293.00	40.70	137.50	5278.82	8.00 S	22.37 W	-14.41	22.82
5303.00	42.20	135.20	5286.32	12.79 S	17.80 W	-7.97	21.37
5313.00	42.60	135.30	5293.70	17.58 S	13.06 W	-1.38	4.06
5323.00	43.00	137.60	5301.04	22.50 S	8.38 W	5.23	16.13
5333.00	43.20	137.10	5308.34	27.53 S	3.75 W	11.85	3.96
5343.00	43.10	133.60	5315.64	32.39 S	1.06 E	18.53	23.96
5353.00	42.30	129.90	5322.99	36.91 S	6.11 E	25.23	26.33
5363.00	42.10	125.90	5330.40	41.03 S	11.41 E	31.92	26.94
5373.00	44.20	124.10	5337.69	44.95 S	17.01 E	38.75	24.34
5383.00	46.70	122.90	5344.71	48.88 S	22.96 E	45.88	26.42
5393.00	48.20	121.60	5351.47	52.81 S	29.19 E	53.24	17.80
5403.00	49.10	122.30	5358.08	56.79 S	35.56 E	60.75	10.42
5413.00	51.00	123.40	5364.50	60.95 S	42.00 E	68.41	20.79
5423.00	53.70	123.70	5370.60	65.32 S	48.59 E	76.33	27.10
5433.00	56.70	123.00	5376.31	69.83 S	55.45 E	84.54	30.55
5443.00	58.90	120.90	5381.64	74.31 S	62.63 E	93.00	28.28
5453.00	61.60	120.20	5386.60	78.72 S	70.11 E	101.67	27.68
5463.00	65.00	120.60	5391.09	83.24 S	77.81 E	110.60	34.19
5473.00	69.20	121.30	5394.98	87.98 S	85.71 E	119.80	42.49
5483.00	72.50	121.80	5398.26	92.92 S	93.76 E	129.24	33.34
5493.00	75.50	123.20	5401.02	98.09 S	101.87 E	138.85	32.88

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (UTAH)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/RU 14-42

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5503.00	78.50	124.40	5403.27	103.51 S	109.96 E	148.59	32.20
5516.00	82.40	126.60	5405.43	110.95 S	120.39 E	161.40	34.33
5531.00	87.70	130.10	5406.72	120.22 S	132.11 E	176.27	42.29
5547.00	90.30	130.40	5407.00	130.55 S	144.32 E	192.14	16.36
5573.33	89.90	128.70	5406.95	147.32 S	164.62 E	218.30	6.63
5605.10	90.60	126.20	5406.81	166.64 S	189.84 E	249.97	8.17
5636.93	91.70	125.20	5406.18	185.21 S	215.68 E	281.75	4.67
5668.63	91.60	126.20	5405.26	203.70 S	241.41 E	313.41	3.17
5700.38	91.70	126.40	5404.35	222.48 S	266.99 E	345.09	0.70
5731.56	91.60	124.60	5403.45	240.58 S	292.36 E	376.23	5.78
5763.41	91.60	125.50	5402.56	258.87 S	318.43 E	408.04	2.82
5795.21	91.20	125.00	5401.79	277.21 S	344.39 E	439.81	2.01
5826.04	91.50	122.70	5401.06	294.38 S	369.98 E	470.62	7.52
5857.24	90.50	123.40	5400.51	311.39 S	396.13 E	501.82	3.91
5889.04	89.90	123.20	5400.40	328.85 S	422.71 E	533.62	1.99
5920.87	90.20	122.90	5400.38	346.21 S	449.39 E	565.45	1.33
5951.97	91.50	123.20	5399.91	363.17 S	475.45 E	596.54	4.29
5983.85	92.10	123.60	5398.91	380.71 S	502.05 E	628.41	2.26
6015.65	92.70	123.60	5397.58	398.29 S	528.52 E	660.18	1.89
6047.54	92.50	123.20	5396.13	415.83 S	555.11 E	692.03	1.40
6079.29	90.80	120.20	5395.22	432.50 S	582.11 E	723.76	10.86
6111.18	89.70	118.80	5395.08	448.21 S	609.87 E	755.59	5.58
6143.08	91.40	119.40	5394.77	463.72 S	637.74 E	787.41	5.65
6174.85	90.80	121.10	5394.16	479.72 S	665.17 E	819.14	5.67
6206.49	89.00	121.10	5394.22	496.06 S	692.27 E	850.76	5.69
6238.27	92.10	122.20	5393.91	512.74 S	719.31 E	882.52	10.35
6269.36	88.70	120.60	5393.70	528.93 S	745.84 E	913.59	12.09
6301.24	92.20	122.30	5393.45	545.56 S	773.04 E	945.46	12.20
6333.00	95.40	122.70	5391.34	562.59 S	799.76 E	977.14	10.15
6364.75	92.10	122.00	5389.27	579.54 S	826.52 E	1008.82	10.62
6396.47	89.60	122.00	5388.80	596.34 S	853.42 E	1040.53	7.88
6428.27	92.70	122.90	5388.16	613.40 S	880.24 E	1072.31	10.15
6460.11	94.90	123.60	5386.05	630.82 S	906.81 E	1104.08	7.25
6491.91	91.00	123.60	5384.41	648.39 S	933.26 E	1135.83	12.26
6523.76	91.50	124.10	5383.72	666.12 S	959.70 E	1167.67	2.22
6555.56	96.20	126.90	5381.58	684.54 S	985.52 E	1199.36	17.19
6587.37	92.80	126.90	5379.09	703.58 S	1010.88 E	1230.99	10.69
6619.09	93.40	127.60	5377.37	722.75 S	1036.09 E	1262.58	2.90

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (UTAH)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/RU 14-42

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6650.87	93.00	127.30	5375.60	742.04 S	1061.28 E	1294.21	1.57
6682.72	90.80	126.30	5374.54	761.11 S	1086.77 E	1325.97	7.59
6714.51	90.90	126.20	5374.07	779.91 S	1112.40 E	1357.71	0.44
6746.26	91.00	125.90	5373.54	798.59 S	1138.07 E	1389.41	1.00
6778.04	92.10	126.00	5372.68	817.24 S	1163.79 E	1421.13	3.48
6809.79	92.50	126.70	5371.41	836.04 S	1189.34 E	1452.80	2.54
6840.78	90.20	123.40	5370.68	853.83 S	1214.69 E	1483.76	12.98
6871.75	89.80	123.60	5370.68	870.92 S	1240.52 E	1514.73	1.44
6902.72	89.40	123.70	5370.90	888.08 S	1266.30 E	1545.69	1.33
6934.47	88.80	123.70	5371.39	905.70 S	1292.71 E	1577.44	1.89
6966.21	87.60	123.40	5372.39	923.23 S	1319.15 E	1609.16	3.90
6997.96	88.10	123.70	5373.58	940.77 S	1345.59 E	1640.89	1.84
7029.72	89.00	123.20	5374.39	958.27 S	1372.08 E	1672.63	3.24
7061.62	89.40	123.70	5374.83	975.85 S	1398.70 E	1704.53	2.01
7093.40	93.30	124.80	5374.08	993.72 S	1424.95 E	1736.29	12.75
7125.13	90.30	124.40	5373.09	1011.73 S	1451.05 E	1767.98	9.54
7156.93	90.90	124.10	5372.75	1029.63 S	1477.34 E	1799.78	2.11
7188.75	90.60	122.90	5372.34	1047.19 S	1503.87 E	1831.59	3.89
7220.52	93.80	123.70	5371.12	1064.61 S	1530.40 E	1863.33	10.38
7252.31	94.60	122.90	5368.79	1082.02 S	1556.90 E	1895.04	3.55
7284.06	95.60	122.00	5365.97	1098.99 S	1583.58 E	1926.66	4.23
7315.82	94.00	122.20	5363.31	1115.81 S	1610.39 E	1958.30	5.08
7347.56	94.40	122.70	5360.98	1132.79 S	1637.11 E	1989.95	2.01
7379.31	93.40	123.70	5358.82	1150.14 S	1663.61 E	2021.63	4.45
7397.53	93.70	123.40	5357.70	1160.19 S	1678.77 E	2039.81	2.33
7429.33	94.40	123.70	5355.45	1177.72 S	1705.20 E	2071.53	2.39
7460.18	91.90	123.40	5353.76	1194.74 S	1730.87 E	2102.33	8.16
7491.38	91.00	123.40	5352.97	1211.91 S	1756.91 E	2133.52	2.88
7523.19	90.40	123.20	5352.58	1229.37 S	1783.49 E	2165.33	1.99
7555.04	89.80	122.70	5352.52	1246.70 S	1810.22 E	2197.18	2.45
7586.91	90.40	123.00	5352.47	1263.98 S	1837.00 E	2229.05	2.10
7618.78	91.20	123.20	5352.02	1281.39 S	1863.69 E	2260.91	2.59
7650.52	91.10	122.90	5351.38	1298.69 S	1890.29 E	2292.65	1.00
7682.31	90.40	123.20	5350.97	1316.03 S	1916.93 E	2324.44	2.40
7714.21	91.20	123.90	5350.52	1333.66 S	1943.52 E	2356.33	3.33
7745.31	92.40	124.40	5349.55	1351.10 S	1969.24 E	2387.41	4.18
7777.20	93.70	125.20	5347.85	1369.28 S	1995.39 E	2419.24	4.78
7809.16	93.30	125.00	5345.90	1387.62 S	2021.49 E	2451.11	1.40

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : Mobil (UTAH)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/RU 14-42

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
7840.11	93.40	125.70	5344.09	1405.50 S	2046.69 E	2481.99	2.28
7871.83	93.70	126.40	5342.13	1424.13 S	2072.28 E	2513.60	2.40
7903.61	94.10	126.70	5339.96	1443.01 S	2097.76 E	2545.25	1.57
7934.59	94.20	126.90	5337.72	1461.52 S	2122.50 E	2576.08	0.72
7966.45	93.20	125.90	5335.67	1480.39 S	2148.09 E	2607.81	4.43
7998.20	92.40	125.50	5334.11	1498.89 S	2173.84 E	2639.49	2.82
8029.96	91.80	123.60	5332.95	1516.89 S	2199.98 E	2671.22	6.27
8061.78	92.40	125.20	5331.78	1534.85 S	2226.22 E	2703.00	5.37
8093.64	93.60	125.00	5330.12	1553.15 S	2252.25 E	2734.80	3.82
8125.47	93.50	125.20	5328.15	1571.42 S	2278.24 E	2766.55	0.70
8157.32	92.10	125.30	5326.59	1589.78 S	2304.22 E	2798.33	4.41
8189.10	91.80	125.50	5325.51	1608.17 S	2330.11 E	2830.07	1.13
8220.91	92.00	125.90	5324.45	1626.73 S	2355.92 E	2861.82	1.41
8252.75	92.30	125.90	5323.26	1645.38 S	2381.70 E	2893.60	0.94
8284.45	91.90	126.00	5322.10	1663.98 S	2407.34 E	2925.24	1.30
8316.20	90.20	126.00	5321.52	1682.64 S	2433.02 E	2956.94	5.35
8348.00	88.40	125.00	5321.90	1701.10 S	2458.91 E	2988.70	6.48
8379.72	88.70	124.10	5322.71	1719.09 S	2485.03 E	3020.40	2.99
8411.47	89.20	123.90	5323.29	1736.84 S	2511.34 E	3052.14	1.70
8443.21	90.00	123.20	5323.51	1754.38 S	2537.79 E	3083.88	3.35
8474.96	90.40	122.50	5323.40	1771.60 S	2564.47 E	3115.63	2.54
8506.58	91.30	122.30	5322.93	1788.54 S	2591.16 E	3147.24	2.92
8537.56	91.90	122.70	5322.07	1805.18 S	2617.28 E	3178.21	2.33
8569.34	92.50	122.50	5320.85	1822.29 S	2644.03 E	3209.96	1.99
8601.26	92.00	122.30	5319.59	1839.38 S	2670.96 E	3241.86	1.69
8633.07	92.00	122.20	5318.48	1856.34 S	2697.85 E	3273.64	0.31
8664.84	91.60	121.60	5317.48	1873.12 S	2724.81 E	3305.39	2.27
8696.60	90.70	120.90	5316.85	1889.60 S	2751.95 E	3337.13	3.59
8728.36	89.60	120.60	5316.76	1905.84 S	2779.25 E	3368.87	3.59
8760.16	89.10	120.20	5317.13	1921.93 S	2806.67 E	3400.63	2.01
8791.91	89.20	119.50	5317.60	1937.73 S	2834.21 E	3432.33	2.23
8823.73	89.20	118.60	5318.04	1953.18 S	2862.02 E	3464.07	2.83
* 8860.00	89.20	118.60	5318.55	1970.54 S	2893.86 E	3500.23	0.00 *

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET.
N/E COORDINATE VALUES GIVEN RELATIVE TO WELL SYSTEM REFERENCE POINT.
TVD COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
THE VERTICAL SECTION ORIGIN IS WELL HEAD.
THE VERTICAL SECTION WAS COMPUTED ALONG 123.00 (TRUE).
CALCULATION METHOD: MINIMUM CURVATURE.

5100-TIE-ON, 5135-INTERPOLATED WELLBORE GYRO SURVEY
5143-GYRO SURVEY, 5153-5213-MWD INTERPOLATED AZI.
5223-8823-MWD SURVEYS, 8860-EXTRAPOLATED TO BIT TD.

MUD REPORT

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #14-42 SE UPPER 1-B/A HORIZONTAL LATERAL

DATE	DEPTH	WT	VIS	FLS	YLD	GEL	pH	WL	CK	CHL	CA	SD	OIL	WTR
5/02/97	5141'	8.4	27	--	--	--	11.6	N/A	N/A	5500	960	--	0%	100%
5/03/97	5199'	8.4	27	--	--	--	11.6	N/A	N/A	5500	880	--	0%	100%
5/04/97	5534'	8.4	32	3	1	1/2	11.6	22	<1/32	5800	720	--	0%	100%
5/05/97	5709'	8.3	34	4	2	2/3	11.0	14.8	<1/32	5800	720	--	6%	94%
5/06/97	6423'	8.0+	32	2	2	0/1	11.8	5.6	<1/32	6400	280	--	17%	83%
5/07/97	7280'	8.2	32	2	2	0/1	11.6	5.8	<1/32	7100	320	--	15%	85%
5/08/97	7460'	8.7	26	--	--	--	11.6	--	--	44K	680	--	0%	100%
5/09/97	7791'	8.8	26	--	--	--	11.8	--	--	48K	160	--	TR	100%
5/10/97	8320'	8.6	27	2	1	0/0	11.6	5.9	<1/32	50K	650	--	8%	92%
5/11/97	8664'	8.7	27	2	1	0/0	11.6	21.6	<1/32	51K	299	--	3%	97%

FORMATION TOPS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #14-42 NW UPPER 1-B/A HORIZONTAL LATERAL

FORMATION NAME		SAMPLES MEASURED DEPTH	SAMPLES TRUE VERTICAL DEPTH	DATUM KB:4565'
UPPER ISMAY		5204'	5192'	-639
LOWER ISMAY		5325'	5303'	-738
GOTHIC SHALE		5393'	5351'	-786
DESERT CREEK		5414'	5365'	-800
DC 1-A		5421'	5370'	-805
DC 1-B		5490'	5400'	-835

GEOLOGICAL SUMMARY

AND

ZONES OF INTEREST

The Mobil Exploration and Production U.S. Inc., Ratherford Unit #14-42 Horizontal Lateral in Section 14, T41S, R23E, was a re-entry of the Mobil Ratherford Unit #14-42, and was sidetracked in a northwesterly direction from 5142' measured depth, 5142' true vertical depth, on May 2, 1997. The lateral reached a measured depth of 8860', true vertical depth of 5318.5' at total depth, with a horizontal displacement of 3500.2' and true vertical plane 118.6 degrees, on May 11, 1997. The lateral was drilled with only minor problems, which were mainly water flows from the 1-A zone due in part to the zone being injected at the same time as the lateral was being drilled. This well used fresh water with polymer sweeps as the drilling fluid, as well as brine water and calcium carbonate to kill the water flows. Also a bit trip was made at a measured depth of 7411' to check the bit and mud motor, as well as to add more drill pipe below the collars. A minor amount of oil was noted while drilling the curve, as well as during the 1-B section of the lateral. The background gases noted on the accompanying mud log were extremely high through out the drilling of the 1-B Zone, and gradually dropped after penetrating the 1-A Zone, due to the well flowing because of offsetting injector wells. The samples showed a minor amount of oil contamination through out the drilling of the lateral section.

The primary objective of the Ratherford Unit #14-42 Horizontal Lateral was the upper 1-B and 1-A Porosity Benches. To identify and define the porosity benches, the effective porosity, staining and reservoir properties in both 1-B and 1-A zones of the Desert Creek Member of the Upper Paradox Formation.

The Upper and Lower Ismay, Gothic Shale, the transition zone at the top of the Desert Creek, as well as the 1-A and 1-B porosity benches were encountered while drilling the curve section of the lateral. Kick off point for this lateral was just above the top of the Upper Ismay, in the basal carbonates of the Honaker Trail. The base of the Honaker Trail Formation of the Upper Hermosa Group was interbedded white to cream to tan, occasionally light gray, cryptocrystalline to microcrystalline, chalky, cherty, fossiliferous limestone packstone, and very argillaceous, brown to gray brown, occasionally tan, cryptocrystalline to microcrystalline dolomite, with scattered rare crinoid fossils, and thin black, carbonaceous, slightly calcareous to dolomitic shale, and scattered brown to black to translucent chert fragments. There was no to very rare visible porosity in the Upper Ismay, with no sample shows or gas increases. The dolomites at the base of the Upper Ismay graded into the medium gray to dark graybrown, carbonaceous, dolomitic, micaceous shale at the base of the Honaker Trail.

The Upper Ismay was picked at a measured depth of 5204' (5192' TVD) at the base of the Honaker Trail. The Upper Ismay was predominately light gray to cream to tan, occasionally brown, cryptocrystalline to microcrystalline, chalky, cherty, fossiliferous limestone, occasionally grading to very silty limestone, grading to very limy siltstone, with very thin interbedded argillaceous, brown to gray brown, microcrystalline to microsucrosic dolomite; very thin black, carbonaceous, slightly calcareous to dolomitic shale, and scattered brown to black to translucent chert fragments. There were no to very rare visible porosity in the Upper Ismay, with no sample shows or gas increases. The dolomites at the base of the Upper Ismay graded into the very thin, carbonaceous, dolomitic shale of the Hovenweep.

The top of the Lower Ismay was picked at 5325' measured depth, 5303' true vertical depth, at the base of the very thin Hovenweep shale. The Lower Ismay was a predominately a light gray to light gray brown, occasionally dark gray to brown, cryptocrystalline to microcrystalline, some microsucrosic to granular, slightly silty to clean, slightly dolomitic, anhydritic and slightly cherty limestone with a trace of scattered micro fossils, and a trace of scattered intercrystalline porosity, with no visible fluorescence, stain or cut. Interbedded in the limestones were light to dark brown, thin dolomites which were cryptocrystalline to microcrystalline, earthy to clean, cherty, anhydritic, with no visible porosity, and no fluorescence, stain or cut. In the basal Lower Ismay, light to medium gray to gray brown, clean to very argillaceous dolomites that were cryptocrystalline to microcrystalline was noted. The limestones in the base were very thin mottled gray to gray brown, cryptocrystalline to microcrystalline, very cherty, and clean to argillaceous. The basal dolomites and limestones graded into the Gothic Shale. The very thin dolomites had a rare trace of intercrystalline porosity, but no fluorescence, stain or cut.

The top of the Gothic Shale is at 5393' measured depth, 5351' true vertical depth. The Gothic Shale was predominantly dark gray to black, silty, carbonaceous, brittle to firm, subblocky to blocky to platy, calcareous to slightly dolomitic and slightly micaceous. The top of the Gothic was gradational from the very thin interbedding of very argillaceous, carbonaceous limestone and very argillaceous, limy dolomite, with the dolomite grading into very dolomitic, carbonaceous shale. The top of the Gothic was picked predominantly by the decrease in penetration rate and the increased percentage of shale in the samples.

Between the Gothic Shale and Desert Creek Porosity Members is a transitional zone, which appears to be gradational. The top of the Desert Creek is commonly picked at the Gothic Shale to transition zone facies change, which in this well occurred at a measured depth of 5414' and a true vertical depth of 5365'. In this well the zone was predominantly a very silty, dolomitic limestone; which was cream to tan, some gray to white to brown to dark brown, cryptocrystalline to microcrystalline, argillaceous, with very rare intercrystalline porosity, but only very spotty dull mineral fluorescence, and visible stain or cut. There were thin gray brown to dark brown dolomites, which were very limy, argillaceous, microcrystalline and slightly silty, with had no visible porosity and no visible staining, fluorescence or cut. The limestones graded into and had cyclic deposits of very thin dolomite packstones and dolomitic to slightly calcareous, light to medium gray, silty claystone. The limestones graded into the porosity of the 1-A zone.

The top of the Desert Creek 1-A zone was picked at 5421' measured depth, 5370' true vertical depth. The pick was base on the increase in the rate of penetration and sample interpretation. The top was picked in this lateral was based on the first slightly algal dolomite grainstone porosity below the Desert Creek top and thinly interbedded slightly silty and limy dolomite grainstones near the top and at the base of the zone. The dolomite was predominately very granular with intercrystalline to very rare algal porosity, some scattered chert fragments, and a fair to good fluorescence, brown stain and a moderately fast cut. The very thin limestones had no visible porosity, fluorescence, stain or cut.

At a measured depth of 5490', 5400' true vertical depth, the top of the 1-B zone was picked. The pick was based on an increase in rate of penetration and sample interpretation. The top was picked in this lateral was picked in the brown, slightly algal dolomite grainstones porosity below the tight very cherty dolomite and limestone packstone between the 1-A and 1-B zones. The dolomite was predominately granular with streaks of fair to good intercrystalline to a trace of algal porosity , some scattered chert fragments, and a trace to good fluorescence, brown stain and a moderately fast cut. The thin very thin limestones noted had no visible porosity, fluorescence, stain or cut.

As the curve was being completed in the 1-B zone the dolomites became increasingly granular and algal. While drilling curve through the section, it appeared that the 1-B porosity bench was possibly defined by the interval 5490' measured depth, 5400' true vertical depth to 5420' true vertical depth. The top of the porosity Bench was marked by facies change, which was gradational, as the drill rate increased rather slowly. The base of the porosity zone is a projection as the base was not encountered while landing the curve.

At a measured depth of 5547', 55407' true vertical depth, with a horizontal displacement of 192' in the slightly algal dolomite grainstones of the 1-B horizon, a trip was made to change the bottom hole assemblies and pick up the MWD tool. Upon resumption of drilling in the 1-B lateral, the well bore was drilled at a very slight upwards angle in the tan to cream, occasionally light brown, cryptocrystalline, very rarely microsucrosic to very rare scattered oolitic, slightly anhydritic, occasionally cherty dolomite grainstone. The dolomite had very rare thin brown, microcrystalline limestones. These dolomites had very good intercrystalline to slightly algal porosity, with dull yellow fluorescence, fair to good brown stain and a good streaming cut. The thin limestones were tight, with no visible porosity, fluorescence, stain, or cut. As the lateral continued in the 1-B zone the dolomites became increasingly medium to dark brown, and algal. This lithology continued to a measured depth of 6274', 5393.5' true vertical depth, with a horizontal displacement of 921', with a slow increase in porosity, fluorescence, stain and cut noted as the well continued upwards to the 1-B to 1-A transition zone at a true vertical depth 5393.5'.

At measured depth of 6274', 5393.5' true vertical depth, to a measured depth of 6435', 5387' measured depth, with a horizontal displacement 1079', the lateral penetrated the transition zone between the 1-B and the 1-A zones. The transition zone was a tan to brown to dark brown, cryptocrystalline to very fine crystalline, occasionally granular, slightly limy, very cherty dolomite packstone, and had varying amounts of light brown to dark smoky gray brown chert fragments. Also noted in the zone were rare microfossils, scattered anhydrite crystals and inclusions. Near the top of the transition zone were tight thin interbedded limestone packstones, with no fluorescence, stain or cut. The dolomites had very rare intercrystalline porosity, very rare algal material. The fluorescence was poor to rare with traces of scattered dark brown stain and very rare black oil stain residue* in the intercrystalline porosity and a poor slow cut. An increase in penetration rate was noted at 6435' measured depth, 5387' true vertical depth. An increase in brown to medium brown dolomite grainstone was noted. The return to dolomite grainstone was due to a vertical facies change as the well bore penetrated the base of the 1-A porosity zone. The porosity zone was encountered at a horizontal displacement of 1077'. The transition zone appeared to be approximately 5' thick.

The base of the 1-A porosity zone was a medium brown, occasionally light brown dolomite grainstone. This dolomite was occasionally cherty, slightly algal, with scattered thin dolomite packstone, and had a trace to good intercrystalline, occasionally algal porosity, fair to good dull yellow fluorescence, trace to good light to dark brown stain, some black dead oil stain, and a good slow to fast streaming cut. This lithology was continuous to a measured depth of 7120', a true vertical depth of 5373', and a horizontal displacement of 1760', when the base of the 1-A zone was encountered. At a measured depth of 6650', 5375.5' true vertical depth, with a horizontal displacement of 1294', as the well bore was tracking the target line, a hard streak with in the best porosity in the 1-A zone was encountered and turned the well bore downward. The hard streak was seen in the samples as a slight increase in limestone packstone and chert fragments. The limestones were very thin light gray, cryptocrystalline, dolomitic and slightly anhydritic. This hard streak appeared to extend form a horizontal displacement of 1294' to 1483'. As the well bore was rotated ahead the well bore dropped in true vertical depth and as noted earlier the well encountered the transition zone between the 1-A to 1-B zones.

As the well bore was turned upward to move away from the base of the 1-A zone, the lithology was a very cherty, crinoidal, limy, light brown dolomite packstone. This lithology was encountered from a measured depth of 7120', 5373' true vertical depth, a horizontal displacement of 1760' to a measured depth of 7282', 5365' true vertical depth and a horizontal displacement of 1926'. As the well bore moved away from the base of the 1-A zone the lithology returned to the light to medium brown, crinoidal, algal dolomite grainstones of the best porosity. These dolomites predominately medium to dark brown, microcrystalline to very finely crystalline, granular to microsucrosic, algal, with scattered anhydrite crystals to inclusions and chert fragments. The dolomites had fair to good intercrystalline to slightly algal porosity, fair dull to bright yellow fluorescence, a fair brown stain, scattered black dead oil stain and a fair to good moderately fast to fast streaming cut.

From a measured depth of 7682', 5351' true vertical depth, with a horizontal displacement of 2324' to a measured depth of 7838', 5344' true vertical depth, with a horizontal displacement of 2477', the tighter limestones at the base of the 1-A porosity zone was again encountered. The slightly algal dolomite grainstone decreased rapidly as the lithology changed vertically to a much lighter, tighter limestone packstone, with an increase in anhydrite inclusions and marked decrease in porosity, stain and cut. Due to the presence of oil in the mud system, and the well producing minor amounts of oil and significant amounts of water, only a very slight visible change in fluorescence was noted. Through this interval the well was gradually turned upward into the dolomite grainstones of the porosity zone. The limestones encountered were cream to tan to white, occasionally light brown, cryptocrystalline to microcrystalline, dense, slightly cherty, very slightly dolomitic, with only scattered thin intercrystalline porosities and very poor sample shows. As the well was continued at a very slight upward angle, the dolomites of the 1-A porosity zone were again encountered and the penetration rate increased in the very slightly algal dolomite grainstones were again the predominate lithology.

At the measured depth of 7998', 5334' true vertical depth, and a horizontal displacement of 2639', a horizontal facies change was noted within the 1-A zone. The 1-A zone became a slightly granular, very slightly algal, light brown to cream to tan, cryptocrystalline to microcrystalline, occasionally anhydritic, limestone grainstone and packstone, with very thin interbedded dolomite grainstone which decreased as the lateral continued. These limestones showed a slight decrease in over all porosity and sample show as compared to the dolomite. This lithology was continuous to termination of the lateral.

As the well bore was continued at an upward angle, the top of the 1-A zone was encountered twice, as the well bore climbed to 6 vertical feet above the center of the target line. The first time was from a measured depth of 8284', 5323' true vertical depth, with a horizontal displacement of 2925' to a measured depth of 8349', 5321.5' true vertical depth and a horizontal displacement of 2956'. The second was from a measured depth of 8494', 5323' true vertical depth, with a horizontal displacement of 3137' to a measured depth of 8690', 5317' true vertical depth and a horizontal displacement of 3330'. In both cases the top of the zone was marked by increases in tight limestone packstone, platy, argillaceous limestone, translucent to white chert fragments, and a significant decrease in porosity, fluorescence, stain and cut. At a measured depth of 8690, the well bore was oriented at a very slightly downward angle to move away from the top of the 1-A zone. At this point the lithology returned to the light brown to tan, cream to white, cryptocrystalline to very finely crystalline, occasionally microsucrosic, slightly anhydritic, very slightly cherty, limestone packstones and grainstones. The limestones had fair visible porosity, fair to good dull to bright yellow fluorescence, a trace of light brown stain, with scattered black dead oil stain and a fair slow to moderately fast to fast streaming cut noted in the samples.

At a total measured depth of 8560', a true vertical depth of 5318.5' and a horizontal displacement of 3500'; the lateral was terminated on May 11, 1997. The lateral was terminated at approximately 3' below the center of the proposed target line, in a very slightly algal limestone packstone and grainstone.

In tracking the well bore through the 1-B bench, the dolomite porosity was continuous, and a significant amount of oil was made while drilling the zone. As the well bore approached the top of the 1-B zone and penetrated the transition zone between the 1-B and 1-A zones, a facies change was noted. The change noted was vertical, from the dolomite grainstones to a tight cherty, dolomitic limestone packstone. As the well bore approached the base of the 1-A zone the lithology returned to a slightly algal dolomite. Tracking well bore through the 1-A zone, vertical facies changes were noted as the well bore was approached the base and top of the 1-A zone, as well as a horizontal lithology change from dolomite grainstone to limestone packstones and grainstones. As the 1-A zone was penetrated the well began to make significant amounts of water (up to 100 barrels per hour), until the near by injection wells were shut in. Even after the offsetting injection well had been shut in the 1-A zone continued to produce water. In tracking the lateral through out it's length both the 1-B and 1-A zones, it appears that both zones trended upward toward the 13-24 well.

Predominant facies changes were associated with the vertical changes with in the dolomites and limestones and the changing of zones and the lateral change in depositional environment, as the environment of deposition changed when encountering the top 1-B zone and the base and top of the 1-A zone, as well as the lateral change in the 1-A zone. With the classification changes, the slightly algal dolomites encountered were of varying thickness and were continuous through out the 1-B zone penetrated. Even with the lateral facies change encountered in the 1-A zone, the porosity in the dolomites and the limestones appeared to be continuous. The effective or the better porosity was associated with the algal dolomite grainstone facies which had fair to good, intercrystalline to algal porosities, and the absence of any major anhydrite plugging. The limestone packstone at the top of the 1-B, and base and top of the 1-A zone had little or no porosity and much poorer permabilities. The limestone grainstones and interbedded packstones noted from a horizontal displacement of 2639' to 3500' had poorer porosities than did the dolomites.

From the top of the 1-B porosity bench to a measured depth of 6235', the dolomite lithology and porosity appeared to be consistent, ranging from light brown to medium brown, cryptocrystalline to very finely crystalline, occasionally microsucrosic to granular, with tighter limestone packstone and an increase in chert and anhydrite as the well bore penetrated the 1-B to 1-A transition zone. The dolomites had fair to good intercrystalline and a trace of algal porosity, a good constant dull to bright yellow fluorescence, with noticeable decreases when at the top of the zone. The staining in the dolomites ranged from trace to good light brown to traces of black dead oil stain and the associated cuts being trace to good moderately fast to fast streaming cuts. In the 1-A porosity zone, the dolomites had fair to good intercrystalline and a trace of algal porosity, a good constant dull to bright yellow fluorescence, with fair oil staining and a fair to good cut. The limestones of the 1-A lateral had a trace to fair intercrystalline porosity, fair to poor dull yellow fluorescence, trace to poor staining, and a fair to poor slow diffuse cut. The sample shows were affected in part due to the oil & water emulsion used as the drilling fluid through out the curve and lateral sections, along with the oil and water encountered while drilling the lateral.

The conclusion drawn from the southeasterly lateral in the 1-B and 1-A zones is that in this area the dolomite and limestone porosities were enhanced by presence of the algal material and the lack of anhydrite filling and cement. Also, having and effect on the porosity, was the minor amount of tight limestone packstones near the top and base, as well as the thin lenses encountered in the 1-A zone of the lateral. Staining was fair to good and there were significant sections where staining was very good, with some black dead oil staining trapped in the intercrystalline porosity and the oolicasts, and along the anhydrite to carbonate contact surfaces. The lateral used the a proposed projected target line as a reference point through the bench, with the well bore following the line of best porosity after entering the 1-A porosity bench.

While drilling the lateral, the high background gas was due in part to the oil and water emulsion used as the drilling fluid, as well as the oil encountered in the 1-B zone. A drop in the background gas was noted upon penetrating the 1-A porosity zone. This lateral can be interpreted to have good reservoir qualities through out. It appears that the porosities are well enough developed to enhance the overall performance of the zone.

*The black residual staining has been called by Dr. Dave Eby & others as "bitchimum" and is also known as "dead oil" ("dd o stn" on mud logs). This staining is associated with the movement of oil over long periods of time and is a good indicator of producable hydrocarbons when associated with productive porosities, but can also be found in porosities that have been filled by anhydrites and other material at later dates.

SAMPLE DESCRIPTIONS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #14-42 SE UPPER 1-B/A HORIZONTAL LATERAL

DEPTH	LITHOLOGY

5142.00 5150.00 "LS wh-crm-tan,crpxl-micxl,pred LS PKST,rthy-chk,anhy,dol,arg-slty,v rr mic fos,grdg to v lmy dol,tt,NFSOC,w/DOL PKST tan,crpxl-micxl,v lmy,arg,sl slty,tt,NFSOC"

5150.00 5160.00 "DOL AA,bcmg brn-mbrn,v arg,chty ip,shy ip,tt,NFSOC,w/intbd LS AA,NFSOC"

5160.00 5170.00 "DOL ltbrn-gybrn,occ brn,crpxl-micxl,occ micsuc,rthy,lmy,LS rich cmt ip,tr mic fos,occ anhy,tt,NFSOC,W/LS ltgy-wh,occ tan,crpxl-micxl,rthy-chk,arg,dol,tr DOL rich cmt,mic fos,chty,tt,NFSOC"

5170.00 5180.00 "DOL AA,incr ltgybrn,tan ip,tr Crin fos,tt,NFSOC,w/LS AA,pred crm-tan,crpxl,tt,NFSOC"

5180.00 5190.00 "DOL AA,incr arg-sl slty,tt,NFSOC,w/LS AA,NFSOC, & SH m-dkgy,sbblky,dol,sl calc,slty ip,mica,v sl carb"

5190.00 5200.00 "SH mgy-dkgybrn,blky-sbblky,rthy,slty,mica,dol,v sl calc,occ sl carb,w/v thn intbd DOL & LS incl"

5200.00 5210.00 "DOL tan-ltgy-ltgybrn,crpxl-micxl,occ arg,cln ip,sl calc,chty ip,v rr mic fos,tt,NFSOC,w/thn LS crm-tan,ltgy,crpxl,chy,sl slty,dol ip,v sl anhy,tt,NFSOC & thn m-dkgy SH AA"

5210.00 5220.00 "LS AA,w/occ trnsl-tan CHT frag,dol,occ grdg to lmy DOL,w/v thn intbd dkgy SH"

5220.00 5230.00 "LS tan-ltgy,offwh,AA,grdg to v lmy SLTST,AA,decr DOL & SH AA,bcmg ltgy-gybrn,v lmy,mica SLTST"

5230.00 5240.00 "SLTST ltgybrn-tan,v lmy,sl mica,occ v sl dol,arg ip,grdg to v slty LS,occ tan-crm crpxl slty sl fos tt LS,scat thn ltgy-brn-tan crpxl lmy arg DOL"

5240.00 5250.00 5240.00 0 "LS tan-wh-crm,crpxl-micxl,rthy-cln,occ chk,sl dol,arg ip,w/scat gy-dkgy SH lams,thn gybrn-tan lmy crpxl DOL incl & v thn v lmy SLTST-v slty LS incl,NFSOC"

5250.00 5260.00 "LS AA,v slty,tt,NFSOC,w/tan v lmy SLTST incl,occ ltgybrn-gybrn micxl rthy sl calc arg DOL,scat dkgy SH lams,trnsl-tan CHT FRAG"

5260.00 5270.00 "LS crm-tan,occ brn-mbrn,crpxl-micxl,rthy-cln,chk ip,chty-scat trnsl-brn CHT frag,v rr SLTST-SH lam,occ gybrn-brn micxl arg lmy DOL incl,sl anhy,tt,NFSOC"

5270.00 5280.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl LS PKST-WKST,w/DOL & CHT AA,NFSOC"

5280.00 5290.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl LS PKST-WKST,w/DOL & CHT AA,NFSOC"

5290.00 5300.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl LS PKST-WKST,w/DOL & CHT AA,NFSOC"

5300.00 5310.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl LS PKST-WKST,w/DOL, CHT AA, & LMSLTST crm-ltgy vfgr,occ mico fos,NFSOC"

DEPTH	LITHOLOGY

5311.00 5320.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl LS PKST-WKST,w/DOL, CHT AA, & LMSLTST crm-ltgy vfgr,occ mico fos,NFSOC"

5320.00 5331.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl-fxln LS PKST-WKST,w/DOL,NFSOC"

5331.00 5340.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl-fxln LS PKST-WKST,w/DOL,NFSOC"

5340.00 5350.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl-fxln LS PKST-WKST,w/DOL, CHT dkbn,NFSOC"

5350.00 5360.00 "LS pred crm-ltgy-tan,brn ip,incr v tt crpxl-fxln LS PKST-WKST,w/DOL, CHT dkbn,NFSOC"

5360.00 5370.00 "LS crm-ltgy-tan,brn ip,incr v tt crpxl-fxln LS PKST-WKST,w/DOL, CHT dkbn,w/SH dkgyNFSOC"

5370.00 5380.00 "LS crm-ltgy-tan,brn fxln-mxln,itxln por,ip w/DOL dkbn,w/SH dkgy,NFSOC"

5380.00 5390.00 "LS crm-ltgy-tan,brn fxln-mxln,itxln por,ip w/pyr w/DOL dkbn,w/SH dkgy,NFSOC"

5390.00 5400.00 "LS crm-ltgy-tan,brn fxln-mxln,itxln por,ip w/pyr w/DOL dkbn,inc SH dkbn-blk,carb,sl slty, calc-slcalc,sooty"

5400.00 5410.00 "SH dkbn-blk,carb,sl slty, calc-slcalc,sooty"

5410.00 5420.00 "SH dkbn-blk,carb,sl slty, calc-slcalc,sooty LS lt-mgybn ltgy occ wh, crpxl-micxl, intxl POR, tr spty dull yel FLOR, p dif CUT"

5420.00 5430.00 "DOL ltbrn-brn,micxl-vfxl,gran-micsuc,rthy,sl anhy-rr ANHY incl,alg,fr-g intxl-alg POR,fr-g dull-bri yel FLOR,fr ltbrn STN,v rr blk dd o STN,fr mod fast-fast stmg CUT,w/thn blk carb SH lams & tt v slty dol LS incl"

5430.00 5440.00 "DOL AA,decr SH lams,rr scat tt ltbrn-gy crpxl LS PKST frag-incl,DOL POR-FLOR-STN-CUT AA"

5440.00 5450.00 "DOL brn-mbrn,micxl-vfxl,gran-micsuc,pred v alg DOL GRNST,scat v thn tt tan-crm crpxl LS PKST incl,rr ANHY xl-incl-occ POR fl,v sl chty,scat v thn carb SH lams,fr-g intxl-alg POR,fr-g dull-bri yel FLOR,g ltbrn-rr blk STN,fr-g mod fast stmg CUT"

5450.00 5460.00 "DOL AA,incr mot-trnsl-bf occ trip CHT frag,POR-FLOR-STN-CUT AA"

5460.00 5470.00 "DOL lt-dkbrn,AA,abnt Cor-Crin-mic fos,incr mot-fos trip CHT frag,POR-FLOR-STN-CUT AA"

5470.00 5480.00 "DOL pred v alg,sl anhy,chty DOL GRNST,fr intxl-alg POR,fr-g dull-bri yel FLOR,tr-fr brn-rr blk STN,fr-g mod fast stmg milky CUT,w/scat trip-fos bf-brn occ trnsl CHT frag & thn scat tan-crm crpxl tt LS PKST incl"

5480.00 5490.00 "DOL AA,occ ltbrn-tan,crpxl PKST,sl decr CHT frag,scat LS incl,POR-FLOR-STN-CUT AA"

DEPTH	LITHOLOGY

5490.00 5500.00 "DOL ltbrn-tan,occ m-dkbrn,crpxl-micxl,tr vfxl-gran,occ alg,bcmg pred DOL PKST,scat CHT frag,n-v rr LS PKST incl,tr intxl-v rr alg POR,rr-tr ltbrn STN,n-v rr blk dd o STN,rr-tr slow-mod fast stmg CUT"

5500.00 5510.00 "DOL AA,pred PKST-scat thn sl alg GRNST,v sl lmy,scat CHT frag,decr POR-FLOR-STN-CUT AA"

5510.00 5520.00 "DOL crm-tan,occ ltbrn-rr brn,crpxl-vfxl,pred DOL PKST,occ GRNST,sl alg,tr intxl-v rr alg POR,tr-fr dull-bri yel FLOR,rr ltbrn STN,tr of fr slow-mod fast stmg CUT,scat crm-tan ltgy crpxl LS PKST,scat CHT frag"

5520.00 5530.00 "DOL AA,incr ltgy-gy,incr sl alg GRNST,incr POR-FLOR-STN-CUT,scat crm-ltgy,crpxl,dol LS PKST,tt,NFSOC"

5530.00 5547.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot occ mic fos trip CHT frag,sl anhy,tr-fr intxl-rr alg POR,fr dull-bri yel FLOR,rr ltbrn STN,fr slow-mod fast stmg CUT,rr wh chk tt LS PKST FRAG"

5547.00 5570.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot occ mic fos trip CHT frag,sl anhy,tr-fr intxl-rr alg POR,fr dull-bri yel FLOR,rr ltbrn STN,fr slow-mod fast stmg CUT,rr wh chk tt LS PKST FRAG"

5570.00 5590.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot occ mic fos trip CHT frag,sl anhy,tr-fr intxl-rr alg POR,fr dull-bri yel FLOR,rr ltbrn STN,fr slow-mod fast stmg CUT,rr wh chk tt LS PKST FRAG"

5590.00 5610.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot occ mic fos trip CHT frag,sl anhy,tr-fr intxl-rr alg POR,fr dull-bri yel FLOR,rr ltbrn STN,fr slow-mod fast stmg CUT,rr wh chk tt LS PKST FRAG"

5600.00 5630.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot occ mic fos trip CHT frag,sl anhy,tr-fr intxl-rr alg POR,fr dull-bri yel FLOR,rr ltbrn STN,fr slow-mod fast stmg CUT,rr wh chk tt LS PKST FRAG"

5630.00 5650.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot trip CHT frag,sl anhy,tr-fr intxl-rr alg POR, good dull-bri yel FLOR,rr ltbrn STN,fr slow-mod fast stmg CUT"

5651.00 5660.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot,sl anhy,tr-fr intxl-rr alg POR, good dull-bri yel FLOR,rr ltbrn STN,fr slow-mod fast stmg CUT"

5660.00 5670.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot,sl anhy,tr-fr intxl-rr alg POR, good dull-bri yel FLOR,ltbrn STN,occ dead oil st. "

5670.00 5680.00 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot,sl anhy,tr-fr intxl-rr alg POR, good dull-bri yel FLOR,ltbrn STN,occ dead oil st. "

5690.00 570000 "DOL crm-tan,occ brn,crpxl-micxl,occ vfxl-micsuc,gran ip,v sl alg,pred DOL PKST,anhy ip,rr scat trnsl-gybrn-mot,sl anhy,tr-fr intxl-rr alg POR, good dull-bri yel FLOR,ltbrn STN,occ dead oil st. "

DEPTH	LITHOLOGY

5700.00 5710.00 "DOL tan-brn,crm ip,crpxl-micxl,occ vfxl-gran,sl alg,pred misuc DOL PKST,scat trnsl CHT frag,sl anhy-rr ANHY xl,tt-fr intxl-rr alg POR,fr dull-bri yel FLOR,tr ltbrn-v rr blk STN,tr-fr slow-mod fast stmg CUT"

5710.00 5720.00 "DOL AA,sl incr ltbrn-brn,alg DOL GRNST,POR-FLOR-STN-CUT AA"

5720.00 5730.00 "DOL pred ltgy,sl incr ltbrn-brn,mic-vfxl,gran-suc,alg
DOL GRNST,tt-fr intxl-rr alg POR,fr-g dull-bri yel FLOR,tr ltbrn STN,rr blk dd o STN,tr-fr slow-mod fast stmg CUT"

5730.00 5740.00 "DOL AA,tr trnsl-bf CHT frag,POR-FLOR-STN-CUT AA"

5740.00 5750.00 "DOL ltgy-ltbrn-brn,crpxl-vfxl,micsuc-gran,occ tt DOL PKST,pred DOL GRNST,occ alg,scat ANHY xl-incl,rr CHT frag,v sl arg,v rr mic fos,tt-g intxl-tr alg POR,fr-g dull-bri yel FLOR,tr ltbrn-v rr blk STN,fr slow-mod fast stmg CUT"

5750.00 5760.00 "DOL AA,sl incr DOL PKST & trnsl CHT frag,POR-FLOR-STN-CUT AA"

5760.00 5780.00 "DOL ltbrn-brn,occ ltgy,crpxl-vfxl,gran-micsuc ip,occ alg,incr DOL PKST,pred DOL GRNST,scat trnsl-bf CHT frag,occ ANHY xl-incl,v rr ANHY fl POR,v rr mic fos,rr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,tr ltbrn-v rr blk STN,fr slow-tr mod fast stmg CUT"

5780.00 5790.00 "DOL AA,sl incr ltgy DOL PKST,pred brn-sl alg DOL GRNST,tr-fr intxl-tr alg POR,fr dull-bri yel FLOR,fr ltbrn STN,tr-fr slow-tr mod fast stmg CUT"

5789.00 5800.00 "DOL AA,POR-FLOR-STN-CUT AA"

5800.00 5830.00 "DOL brn-mbrn,occ ltgy-tan,micxl-vfxl,gran-micsuc,occ crpxl DOL PKST,pred alg DOL GRNST,v rr scat trnsl-bf CHT frag,v rr Crin fos,occ anhy-v rr ANHY xl,fr-g intxl-tr alg POR,tr-fr ltbrn-brn STN,v rr spty blk dd o STN,fr-g mod fast-fast stmg CUT"

5829.00 5850.00 "DOL AA,bcmg tan-ltgy,crpxl-micxl,tt, chty DOL PKST,w/scat trnsl-bf CHT FRAG,decr POR-FLOR-STN-CUT"

5850.00 5870.00 "DOL m-dkbrn-choc brn,ltgy-tan ip,micxl-vfxl,gran-micsuc,occ suc,rr crpxl DOL PKST,pred sl alg DOL GRNST,tr ANHY xl-incl,v rr Crin-mic fos,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr-g brn STN,v rr blk dd o STN,fr-g mod fast-fast stmg CUT"

5870.00 5890.00 "DOL ltbrn-gy-ltgybrn,occ m-dkbrn-brn,crpxl-vfxl,gran-micsuc ip,sl suc,intbd crpxl DOL PKST & alg DOL GRNST,scat trnsl CHT frag,rr Crin-mic fos,tt-g intxl-rr alg POR,tr-fr dull-bri yel FLOR,n-tr brn-ltbrn STN,n-v rr blk dd o STN,n-g mod fast-fast stmg CUT"

5890.00 5900.00 "DOL pred m-dkbrn alg DOL GRNST,occ DOL PKST,AA,fr-g intxl-tr alg POR,tr-fr dull-bri yel FLOR,fr-g brn STN,n-v rr blk dd o STN,fr-g mod fast-fast stmg CUT"

5900.00 5920.00 "DOL ltgy-gy,ltbrn-brn,crpxl-vfxl,micsuc-gran ip,sl alg,incr DOL PKST & GRNST,occ mic fos,sl anhy-rr ANHY xl-incl,tt-g intxl-tr alg POR,tr-fr dull-bri yel FLOR,tr-fr ltbrn-brn STN,v rr spty blk dd o STN,tr-g slow-fast stmg CUT"

DEPTH	LITHOLOGY

5920.00 5950.00 "DOL pred m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,suc ip,alg GRNST,occ tan-ltgy-gy crpxl DOL PKST,v rr mic fos,v rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

5950.00 5970.00 "DOL tan-ltbrn-brn,crpxl-vfxl,occ micsuc-gran,incr anhy tt DOL PKST,pred sl alg DOL GRNST,v rr ANHY xl-incl,scat trnsl CHT frag,v rr mic fos,tt-g intxl-rr alg POR,fr dull-bri yel FLOR,tr-fr ltbrn STN,v rr spty blk dd o STN,p slow-fr mod fast-fast stmg CUT"

5970.00 5980.00 "DOL AA,sl incr DOL PKST,POR-FLOR-STN CUT AA"

5980.00 6000.00 "DOL ltbrn-brn,rr m brn,micxl-vfxl,micsuc-gran,alg,occ crpxl DOL PKST,v rr scat ANHY xl-incl-v rr POR fl,scat CHT frag,v rr mic fos,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr-g ltbrn-v rr blk STN,fr-g mod fast-fast stmg CUT"

6000.00 6030.00 "DOL tan-ltbrn-brn,crpxl-vfxl,occ micsuc-gran,incr anhy tt DOL PKST,pred alg DOL GRNST,v rr ANHY xl-incl,scat trnsl CHT frag,v rr mic fos,tr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,tr-fr ltbrn STN,rr spty blk dd o STN,tr slow-fr mod fast-fast stmg CUT"

6030.00 6050.00 "DOL ltbrn-brn,rr mbrn,crpxl-vfxl,micsuc-gran ip,occ alg,pred micxl DOL PKST,intbd DOL GRNST,rr scat CHT frag,occ ANHY xl-v rr POR fl,v rr mic fos,rr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,tr-fr ltbrn STN,v rr blk dd o STN,tr-g slow-fast stmg CUT"

6050.00 6070.00 "DOL AA,scat trnsl-lt smky gybrn-mot wh sl fos occ trip CHT frag,POR-FLOR-STN-CUT AA"

6070.00 6080.00 "DOL ltbrn-mbrn-brn,occ ltgy,crpxl-vfxl,gran-micsuc ip,sl suc,intbd crpxl DOL PKST & alg DOL GRNST,scat trnsl CHT frag,rr Crin-mic fos,tr-g intxl-tr alg POR,tr-fr dull-bri yel FLOR,n-tr brn-ltbrn STN,rr blk dd o STN,tr-g mod fast-fast stmg CUT"

6080.00 6100.00 "DOL lt-mbrn,crpxl-vfxl,micsuc-gran,decr anhy tt DOL PKST,pred alg DOL GRNST,v rr ANHY xl-incl,scat trnsl CHT frag,v rr mic fos,tr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,tr-fr ltbrn STN,rr spty blk dd o STN,tr slow-fr mod fast-fast stmg CUT"

6100.00 6110.00 "DOL AA,pred alg DOL GRNST,POR-FLOR-STN-CUT AA"

6110.00 6130.00 "DOL tan-crm,occ ltbrn,crpxl-micxl,occ vfxl-gran,rr micsuc,v sl alg,pred tt DOL PKST w/thn crm-wh crpxl,sl arg LS PKST incl & trnsl-bf-mot wh trip CHT frag,rr-tr intxl-v rr alg POR,tr-fr dull-bri yel FLOR,rr-tr ltbrn STN,n-p slow-v rr mod fast CUT"

6130.00 6150.00 "DOL pred m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

6150.00 6160.00 "DOL pred m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

6170.00 6190.00 "DOL pred m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

DEPTH	LITHOLOGY

6190.00 6210.00 "DOL pred m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

621000 6220.00 "DOL pred m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

6220.00 6240.00 "DOL pred m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

6240.00 6250.00 "DOL pred dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,to suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr P0R,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

6260.00 6270.00 "DOL pred dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,to suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr P0R,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

6260.00 6270.00 "DOL pred dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,to suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr P0R,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

6270.00 6290.00 "DOL pred dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,to suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos,rr scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr P0R,fr-g dull-bri yel FLOR,fr brn-mbrn STN,v rr dd o STN,fr-g mod fast-fast stmg CUT"

6290.00 6310.00 "DOL pred dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,to suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos, scat CHT frag,rr ANHY xl-incl,fr-g intxl-tr,rr yug P0R,fr-g dull-bri yel FLOR,fr brn-mbrn STN,fr-g mod fast-fast stmg CUT"

6310.00 6320.00 "DOL pred dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,to suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,v rr mic fos, scat CHT frag,rr ANHY xl-incl,rr r-rbn sltst,fr-g intxl-tr,rr yug P0R,fr-g dull-bri yel FLOR,fr brn-mbrn STN,fr-g mod fast-fast stmg CUT"

6320.00 6340.00 "DOL pred dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,to suc ip,alg DOL GRNST,w/ tan crpxl DOL PKST,rr r-rbn sltst,scat ltbn -rbn CHT frag,fr-g intxl-tr,rr yug P0R,fr-g dull-bri yel FLOR,fr brn-mbrn STN,fr-g mod fast-fast stmg CUT"

6340.00 6350.00 "DOL pred dkbrn,occ ltbrn,micxl-vfxl,gran-micsu,to suc ip,alg DOL GRNST,,fr-g intxl-tr,rr yug P0R,fr-g dull-bri yel FLOR,fr brn-mbrn STN,fr-g mod fast-fast stmg CUT"

6350.00 6360.00 "DOL tan-dkgybrn-dkbrn,micxl-vfxl,occ micsuc-gran,crpxl ip,pred DOL GRNST w/tr DOL PKST,v chty-abnt ltgy-gybrn CHT frag,rr crpxl sl dol LS PKST,tr-fr intxl POR,tr dull-bri yel FLOR,tr lt-dkbrn STN,tr-fr slow-fast stmg CUT"

6360.00 6370.00 "DOL AA,incr ltbrn-brn,sl incr DOL PKST,decr mgy CHT frag,tr-fr POR-FLOR-STN-CUT"

DEPTH	LITHOLOGY

6370.00 6380.00 "DOL brn,occ dkbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg,AA,tr-abnt gy-mgy-trnsl-brn mot CHT frag,tr-fr intxl-rr alg POR,FLOR-STN-CUT AA"

6380.00 6400.00 "DOL ltbrn-brn,occ mgy-gybrn,micxl-vfxl,micsuc-gran,rr crpxl,pred sl alg DOL GRNST w/v rr DOL PKST,v rr mic fos-Crin fos,tt-tr intxl-v rr scat alg POR,rr-tr dull-bri yel FLOR,spty ltbrn-mbrn STN,v rr spty blk dd o STN,rr-tr slow-v rr mod fast stmg CUT"

6400.00 6410.00 "DOL AA,abnt CHT frag,scat tan crpxl v sl dol tt LS,rr-tr intxl-alg POR,tr-fr dull-bri yel FLOR,tr lt-mbrn STN,n-v rr blk dd o STN,n-v rr slow dif-slow stmg CUT"

6410.00 6420.00 "DOL lt-mbrn,occ dkbrn-dkgybrn,cprxl-vfxl,micsuc-gran ip,occ crpxl,intbd DOL PKST-GRNST,v sl alg,rr Crin fos,occ crpxl plty sl dol LS PKST,abnt bf-trnsl-mot wh-clr dkgy CHT frag,decr POR-FLOR-STN-CUT"

6420.00 6430.00 "DOL AA,incr plty LS AA,scat mic fos,CHT AA,sl incr POR-FLOR-STN-CUT"

6430.00 6450.00 "DOL brn-ltbrn,occ m-dkbrn,crpxl-vfxl,micsuc-gran,occ crpxl,pred micsuc sl alg DOL GRNST,scat tan-crm crpxl plty LS PKST incl,tr smky gy-brn mot wh CHT frag,v rr mic fos,sl anhy,tt-g intxl-rr alg POR,tr dull-bri yel FLOR,scat ltbrn STN,fr mod fast CUT"

6450.00 6470.00 "DOL brn-mbrn,occ dkbrn,crpxl-vfxl,micsuc-gran ip,rr DOL PKST,pred alg sl anhy chty DOL GRNST,v rr mic fos,w/scat mot v sl fos trip CHT frag,v rr crpxl plty LS lams,tr-g intxl-rr alg POR,tr-fr dull-bri yel FLOR,fr-g mod fast-fast stmg CUT"

6470.00 6480.00 "DOL AA,incr dkbrn gybrn DOL GRNST-sl alg,v rr crm-tan mot sl fos LS PKST,scat mot occ trip CHT frag,POR-FLOR-STN-CUT AA"

6480.00 6490.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6490.00 6500.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6500.00 6510.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6510.00 6520.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6530.00 6540.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6540.00 6560.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,rr dd o stn, POR-FLOR-STN-CUT AA"

6560.00 6570.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr dkgy shale,v rr LS AA,POR-FLOR-STN-CUT AA"

6570.00 6590.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr dkgy shale,v rr LS AA,POR-FLOR-STN-CUT AA"

DEPTH	LITHOLOGY

6590.00 6600.00 "DOL pred brn-mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6600.00 6610.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6610.00 6620.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6622.00 6630.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6630.00 6640.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,rr occ vug por, POR-FLOR-STN-CUT AA"

6640.00 6650.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6650.00 6660.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6660.00 6670.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6670.00 6680.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6680.00 6690.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6690.00 6700.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6700.00 6710.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6710.00 6720.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6720.00 6730.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr LS AA,POR-FLOR-STN-CUT AA"

6730.00 6740.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr ltgy-ltbn LMST,POR-FLOR-STN-
CUT AA"

6740.00 6750.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr ltgy-ltbn LMST,POR-FLOR-STN-CUT AA"

DEPTH	LITHOLOGY

6750.00 6760.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,rr ltgy-ltbn, crm LMST,rr micro fos,POR-FLOR-STN-CUT AA"

6770.00 6780.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr ltgy-ltbn LMST,POR-FLOR-STN-CUT AA"

6780.00 6790.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr ltgy-ltbn LMST,POR-FLOR-STN-CUT AA"

6790.00 6800.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr ltgy-ltbn LMST,POR-FLOR-STN-CUT AA"

6800.00 6810.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr ltgy-ltbn LMST,POR-FLOR-STN-CUT AA"

6810.00 6820.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,v rr ltgy-ltbn LMST,POR-FLOR-STN-CUT AA"

6830.00 6840.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, mico xln,tight, POR-FLOR-STN-CUT AA"

6840.00 6850.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, mico xln,tight, POR-FLOR-STN-CUT AA"

6850.00 6860.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, POR-FLOR-STN-CUT AA"

6860.00 6870.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, POR-FLOR-STN-CUT AA"

6870.00 6881.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, POR-FLOR-STN-CUT AA"

6881.00 6890.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, POR-FLOR-STN-CUT AA"

6890.00 6906.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, POR-FLOR-STN-CUT AA"

6899.00 6910.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, POR-FLOR-STN-CUT AA"

6910.00 6920.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, POR-FLOR-STN-CUT AA"

6920.00 6930.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,LTgy-ltbn LMST, POR-FLOR-STN-CUT AA"

6930.00 6940.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,ltbn LMST, POR-FLOR-STN-CUT AA"

DEPTH	LITHOLOGY

6940.00 6950.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,ltbn LMST,rr micro fos, POR-FLOR-STN-CUT AA"

6950.00 6960.00 "DOL pred mbrn,occ ltbrn,dkbrn ip,micxl-vfxl,gran-micsuc,occ suc,alg DOL PKST,scat CHT AA,ltbn LMST, POR-FLOR-STN-CUT AA"

6960.00 6980.00 "DOL tan-brn-dkbrn,crpxl-vfxl,gran-suc ip,v sl alg,pred DOL GRNST,w/scat DOL PKST-LS PKST frag,occ LS rich cmt,tr CHT frag,occ Crin-v rr Cor fos,fr-g intxl-v rr alg POR,v rr tt,fr-g dull-bri yel FLOR,fr-g lt-dkbrn STN,g mod fast stmg CUT"

6980.00 6990.00 "DOL AA,sl incr LS PKST,incr LS rich cmt,incr mot trip CHT frag,POR-FLOR-STN-CUT AA"

6990.00 7000.00 "DOL tan-brn-dkbrn,crpxl-vfxl,gran-suc ip,v sl alg,pred DOL GRNST,rr DOL PKST-scat sl dol LS PKST frag,occ LS rich cmt,tr mot trip CHT frag,tr Crin-v rr Cor fos,fr-g intxl-v rr alg POR,v rr tt,fr-g dull-bri yel FLOR,fr-g lt-dkbrn STN,g mod fast stmg CUT"

7000.00 7010.00 "DOL AA,incr lmy DOL PKST-sl dol LS PKST incl,incr trip mot wh-brn CHT frag,scat Crin-Cor fos,sl alg,decr intxl POR,fr dull-bri yel FLOR,tr-fr brn-dkbrn-v rr blk STN,rr to fr-g mod fas-fast stmg CUT"

7010.00 7020.00 "DOL AA,w/scat LS PKST frag,decr CHT frag,fr-g intxl-tr alg POR,fr-g brn-dkbrn STN,scat rr blk dd o STN,fr-g mod fast stmg CUT"

7020.00 7030.00 "DOL pred brn-mbrn,sl alg DOL GRNST,AA,rr LS-DOL PKST frag,scat Crin-Cor fos,fr-g POR-FLOR-STN-CUT AA"

7030.00 7040.00 "DOL AA,POR-FLOR-STN-CUT AA"

7040.00 7050.00 "DOL brn-mbrn,occ dkbrn,crpxl-vfxl,gran-suc ip,scat sl lmy DOL PKST & sl dol LS PKST incl,pred alg DOL GRNST w/LS rich cmt,scat Crin-Cor fos,tr trnsl-wh-brn mot CHT frag,tr-fr intxl-tr alg POR,fr-g dull-bri yel FLOR,tr-fr ltbrn-v rr blk STN,tr of fr-g CUT"

7050.00 7060.00 "DOL lt-dkbrn,pred alg DOL GRNS,rr-tr DOL PKST & LS PKST,scat Crin-Cor fos,rr-tr brn-wh,occ mot sl fos CHT frag,AA,POR-FLOR-STN-CUT AA"

7060.00 7070.00 "DOL AA,pred dkbrn micsuc alg DOL GRNST occ LS rich cmt,fr-g intxl-fr alg POR,fr-g dull-bri yel FLOR,g dkbrn STN,n-v rr blk dd o STN,g mod fast-fast CUT "

7070.00 7080.00 "DOL AA,sl incr lmy DOL PKST,decr POR-FLOR-STN-CUT AA"

7080.00 7090.00 "DOL m-dkbrn,occ ltbrn-brn,micxl-vfxl,gran-suc DOL GRNST,occ crpxl,scat DOL PKST,occ Crin-Cor fos,tr trnsl-wh-bf mot trip CHT frag,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,g dkbrn STN,rr blk dd o STN,fr-g mod fast-fast
stmg CUT"

7090.00 7100.00 "DOL AA,decr LS PKST & CHT frag,sl decr POR,fr-g FLOR-STN-CUT"

7100.00 7120.00 "DOL m-dkbrn,occ ltbrn-brn,micxl-vfxl,gran-suc DOL GRNST,occ crpxl,scat DOL PKST & LS PKST,LS rich cmt,occ Crin-Cor fos,rr trnsl-wh-bf mot trip CHT frag,fr-g intxl-tr alg POR,fr-g dull-bri yel FLOR,g dkbrn STN,rr blk dd o STN,fr-g mod fast-fast stmg CUT"

DEPTH	LITHOLOGY

7120.00 7130.00 "DOL AA,pred alg DOL GRNST,abnt mot wh-tan trip CHT frag,occ LS rich cmt,scat mic-Crin-Cor fos,incr DOL PKST,sl decr intxl-alg POR,POR-FLOR-STN-CUT AA"

7130.00 7140.00 7131.61 0 "DOL AA,incr trip CHT frag,POR-FLOR-STN-CUT AA"

7140.00 7150.00 "DOL lt-dkbrn,tan ip,crpxl-vfxl,gran-suc ip,intbd DOL PKST & GRNST,LS rich cmt,rr Crin fos,occ alg,scat CHT frag,rr ltgy-tan crpxl LS PKST,tt-fr intxl-rr alg POR,tr-fr m-dkbrn-v rr blk stn,p slow-fr fast stmg CUT"

7150.00 7160.00 "DOL AA,incr alg lmy DOL GRNST,scat CHT frag-occ dksmky gy AA,v rr LS PKST,POR-FLOR-STN-CUT AA"

7160.00 7170.00 "DOL AA,incr v sl alg lmy DOL PKST,trip CHT frag,occ Crin fos,tr-fr intxl-rr-tr alg POR,tr-fr dull-bri yel FLOR,fr ltbrn STN,fr slow-tr mod fast stmg CUT"

7170.00 7180.00 "DOL brn-dkbrn,occ tan,crpxl-vfxl,gran-suc ip,incr-pred sl alg micsuc lmy DOL PKST,scat DOL GRNST,rr-tr LS PKST frag,rr-tr tr ip mot wh-brn CHT frag,rr Crin fos,tr-g intxl-rr alg POR,fr dull-bri yel FLOR,FR brn-dkbrn STN,fr slow-tr fast stmg CUT"

7180.00 7190.00 "DOL AA,bcmg pred brn-dkbrn micxl-micsuc DOL PKST,decr LS incl,decr POR-STN-CUT,FLOR AA"

7190.00 7200.00 "DOL AA,incr alg lmy DOL GRNST,scat CHT frag-occ dksmky gy AA,v rr LS PKST,POR-FLOR-STN-CUT AA"

7200.00 7210.00 "DOL brn-mbrn,occ dkbrn,crpxl-vfxl,occ gran-suc,micsuc ip,pred lmy alg DOL GRNST w/intbd ltbrn-brn lmy micsuc DOL PKST,LS cmt,scat trnsl-wh mot-brn CHT frag,occ Crin fos,fr-g intxl-alg POR,fr dull-bri yel FLOR,tr-fr lt-dkbrn STN,fr slow-mod fast stmg CUT"

7210.00 7220.00 "DOL AA,incr trip CHT frag & sl dol micxl-crpxl LS PKST incl,POR-FLOR-STN-CUT AA"

7220.00 7230.00 "DOL AA,bcmg pred lmy tt-micsuc v sl alg DOL PKST,tr CHT frag,tt-fr intxl-v rr alg POR,tr-fr dull-bri yel FLOR,tr ltbrn-brn STN,fr slow-mod fast stmg CUT"

7230.00 7250.00 "DOL ltbrn-brn,occ m-dkbrn,crpxl-vfxl,gran-micsuc ip,scat Crin fos,tr trip-mot wh-bf sl fos CHT frag,occ tan-brn crpxl LS PKST incl,occ LS rich cmt,tt-fr intxl,tr dull-bri yel FLOR,tr dull-bri yel FLOR,fr slow-tr mod fast stmg CUT"

7250.00 7260.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg,decr lmy DOL PKST,pred lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,v rr LS PKST incl,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg
CUT"

7270.00 7290.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg,decr lmy DOL PKST,pred lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,v rr LS PKST incl,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7290.00 7300.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg,decr lmy DOL PKST,pred lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,v rr LS PKST incl,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

DEPTH	LITHOLOGY

7300.00 7310.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg,decr lmy DOL PKST,pred lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,v rr LS PKST incl,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7320.00 7330.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg,pred lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,v rr LS PKST incl,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7330.00 7340.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7350.00 7360.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7370.00 7380.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7380.00 7400.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7400.00 7411.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7411.00 7420.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7420.00 7430.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,the last 20' samples contained ss fgr well rd cl., probably wash,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7450.00 7460.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,the last 30' samples contained ss fgr well rd cl., probably wash,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7460.00 7470.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7470.00 7490.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7490.00 7500.00 "DOL m-dkbrn,occ ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7500.00 7520.00 "DOL m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7520.00 7530.00 "DOL m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

DEPTH	LITHOLOGY

7530.00 7550.00 "DOL m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7550.00 7560.00 "DOL m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,rr ss fgr fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7560.00 7570.00 "DOL m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,rr ss fgr fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7570.00 7590.00 "DOL m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,rr ss fgr fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7590.00 7600.00 "DOL m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,rr ss fgr fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7600.00 7610.00 "DOL pred dkbn to m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,rr ss fgr fr-g intxl-tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7620.00 7630.00 "DOL pred dkbn to m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7630.00 7650.00 "DOL pred dkbn to m-ltbrn,micxl-vfxl,gran-micsuc,occ suc,sl alg, lmy alg suc DOL GRNST,scat trnsl-bf mot CHT frag,occ Crin fos,tr alg POR,fr-g dkbrn-brn STN,fr-g mod fast stmg CUT"

7650.00 7660.00 "DOL brn-dkbrn,micxl-vfxl,gran-micsuc,occ suc,alg ip,scat dns DOL & LS PKST frag,occ trnsl-bf occ mot wh CHT frag,v rr Crin fos,v rr tt-fr-g intxl-tr alg POR,tr-fr dull-bri yel FLOR,fr-g dkbrn-brn STN,fr-g mod fast-fast stmg CUT"

7660.00 7670.00 "DOL AA,pred sl alg DOL GRNST w/LS rich cmt,incr tan-brn crpxl tt chty LS PKST & mot CHT frag,POR-FLOR-STN-CUT AA"

7670.00 7680.00 "DOL AA,incr tan-brn tt lmy DOL PKST,tr intbd tan,dol,chty,crpxl LS PKST,tr scat trnsl-bf-wh mot ip CHT frag,scat Crin fos,tr-fr intxl-rr alg POR,fr dull-rr bri yel FLOR,tr lt-dkbrn STN,tr fr-g mod fast-fast stmg CUT"

7680.00 7690.00 "DOL pred ltbrn-brn,crpxl-micxl,occ micsuc,lmy,occ tt DOL PKST,w/scat intbd DOL GRNST AA,incr LS PKST-CHT AA,rr-fr intxl-v rr alg POR,fr dull yel FLOR,tr ltbrn-rr dkbrn STN,mfr mod fast stmg CUT"

7690.00 7700.00 "DOL AA,pred DOL PKST,incr DOL GRNST,LS-CHT AA,POR-FLOR-STN-CUT AA"

7700.00 7710.00 "INTBD tan-brn crpxl-micxl lmy DOL PKST & tan occ crm crpxl sl dol fos chty LS PKST,tr-fr amnt lt-dkbrn micxl-vfxl,misuc DOL GRNST sl alg,scat CHT frag,rr-tr intxl-v rr alg POR,fr dull yel FLOR,tr lt-dkbrn stn,tr-fr mod fast stmg CUT"

7710.00 7730.00 "LS tan-brn,occ mbrn,crpxl-vfxl,occ micsuc-gran ip,pred LS GRNST,occ crpxl LS PKST--DOL PKST,mic-Crin fos,tr trnsl-bf & mot wh-bf CHT frag,v sl anhy,tr-fr intxl-rr alg POR in LS & DOL,tr-fr dull yel FLOR,tr-fr lt-dkbrn STN,tr-fr mod fast stmg CUT"

DEPTH	LITHOLOGY

7730.00 7740.00 "INTBD LS & DOL GRNST,decr PKST,LS GRNST has DOL rich cmt,alg,mot wh-bf occ brn CHT frag,scat Crin fos,POR-FLOR-STN-CUT AA"

7740.00 7750.00 "LS tan-brn,occ mbrn,crpxl-vfxl,micsuc-gran,pred v sl alg dol LS GRNST,w/thn lmy sl alg DOL GRNST,incr lmy DOL & dol LS PKSTS,scat bf-wh-mot CHT frag,scat Crin fos,fr intxl-rr alg POR,fr ltbrn-v rr blk STN,tr-fr mod fast stmg CUT"

7750.00 7770.00 "DOL brn-mbrn,occ dkbrn,crpxl-vfxl,micsuc-gran,occ suc,alg ip,pred DOL GRNST,w/decr LS GRNST AA,incr ltgy LS & ltbrn DOL PKST AA,tr ltbrn-wh occ mot CHT frag,scat Crin fos,tr-fr intxl-v rr alg POR,mod g dull yel FLOR,fr ltbrn STN,fr-g mod fast-slow CUT"

7770.00 7780.00 "DOL AA,incr ltbrn-tan,occ dkbrn,micxl-vfxl,v dol-DOL rich cmt,sl alg LS GRNST,w/strks ltbrn-tan,ltgy,crpxl LS PKS & ltbrn lmy dns DOL PKST,scat CHT frag AA,POR-FLOR-STN-CUT AA"

7780.00 7790.00 "DOL AA,sl incr DOL GRNST w/LS rich cmt,& incr sl dol,v sl fos LS PKST,scat DOL PKST & decr CHT frag,AA,tr intxl-rr alg POR,FLOR-STN-CUT AA"

7790.00 7800.00 "DOL brn-mbrn,occ dkbrn,crpxl-vfxl,rr micsuc-gran,v sl alg,pred DOL PKST,w/decr LS GRNST & ltgy-tan LS PKST,incr lmy DOL PKST,tr ltbrn-wh occ mot CHT frag,scat Crin fos,rr-tr intxl-v rr alg POR,fr dull yel FLOR,tr ltbrn STN,fr-g mod fast-slow CUT"

7800.00 7810.00 "DOL pred lt-mbrn,occ dkbrn DOL GRNST,sl lmy cmt,occ alg,scat Crin fos,occ LS-DOL PKST incl,fr-g intxl-alg POR,fr-g dull yel FLOR,fr ltbrn-brn STN,fr mod fast CUT"

7810.00 7820.00 "DOL pred dkbrn DOL GRNST AA,POR-FLOR-STN-CUT AA"

7820.00 7840.00 "DOL brn-dkbrn,occ ltbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7840.00 7850.00 "DOL brn-dkbrn,occ ltbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7860.00 7870.00 "DOL brn-dkbrn,occ ltbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7870.00 7890.00 "DOL brn-dkbrn,occ ltbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7890.00 7900.00 "DOL brn-dkbrn,occ ltbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7900.00 7910.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

DEPTH		LITHOLOGY

7910.00 7930.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7930.00 7940.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7940.00 7950.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7950.00 7960.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7960.00 7980.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg POR,fr-g slow-fast stmg CUT"

7980.00 8000.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg rr micxl LMST,POR,fr-g slow-fast stmg CUT"

8000.00 8010.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg rr cm-tn-ltbn micxl LMST,POR,fr-g slow-fast stmg CUT"

8010.00 8040.00 "LS wh-crm-tan,crpxl-micxl,pred LS PKST, w/ DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,pred sl alg DOL GRNST w/v lmy cmt ip,scat CHT frag,tr mic-rr Crin fos,fr-g intxl-rr alg,POR,fr-g slow-fast stmg CUT"

8040.00 8050.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,fr-g slow-fast stmg CUT,w/LS wh-crm-tan,crpxl-micxl,pred LS PKST"

8050.00 8060.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,fr-g slow-fast stmg CUT"

8050.00 8060.00 "LS crm-tan,occ brn-mbrn,crpxl-micxl,rthy-cln,chk "

8060.00 8070.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,fr-g slow-fast stmg CUT"

8070.00 8080.00 "LS crm-tan,occ brn-mbrn,crpxl-micxl,rthy-cln,chk, & DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,fr-g slow-fast stmg CUT"

8080.00 8090.00 "DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,fr-g slow-fast stmg CUT"

DEPTH		LITHOLOGY
8080.00	8090.00	"LS crm-tan,occ brn-mbrn,crpxl-micxl,rthy-cln,chk "
8100.00	8110.00	"LS crm-tan,occ brn-mbrn,crpxl-micxl,rthy-cln,chk "
8100.00	8110.00	"DOL ltbrn-dkbrn,micxl-vfxl,gran-suc,occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST,fr-g slow-fast stmg CUT"
8110.00	8120.00	"LS crm-tan,occ brn-mbrn,crpxl-micxl,rthy-cln,chk DOL ltbrn-dkbrn, micxl-vfxln,gran-suc, occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST, fr-, slow-fast stmg cut"
8120.00	8130.00	"LS crm-tan,occ brn-mbrn,crpxl-micxl,rthy-cln,chk DOL ltbrn-dkbrn, micxl-vfxln,gran-suc, occ crpxl lmy DOL PKST & crm-tan plty dol LS PKST, fr-, slow-fast stmg cut"
8130.00	8140.00	"LS tan-brn,crpxl-vfxl,occ cln-dns,sl dol,intbd LS PKST & GRNST w/v thn intbd lmy mbrn-gybrn DOL GRNST,sl anhy-rr ANHY incl-xl,trnsl-wh-bf CHT frag,tt-fr intxl-v rr alg POR,fr dull yel FLOR,tr lt-mbrn STN,tr-fr mod fast CUT"
8139.00	8150.00	"LS AA,w/incr CHT frag,occ DOL GRNST incl,POR-FLOR-STN-CUT AA"
8150.00	8160.00	"LS tan-brn,occ crm,crpxl-micxl,occ vfxl-micsuc,pred LS PKST,w/intbd brn dol LS GRNST & m-dkbrn lmy sl alg DOL GRNST,scat CHT frag,occ ANHY xl,tt-tr intxl-rr alg POR,fr dull-bri yel FLOR,tr-fr ltbrn-rr dkbrn STN,fr mod fast stmg CUT"
8160.00	8170.00	"LS AA,decr DOL GRNST & CHT frag,sl incr LS GRSTN POR,FLOR-STN-CUT AA"
8170.00	8180.00	"LS AA,w/intbd DOL AA,incr trnsl-wh-bf CHT frag,decr POR-FLOR-STN-CUT"
8180.00	8190.00	"LS tan-brn,occ crm,crpxl-micxl,occ vfxl-micsuc,pred LS PKST,w/intbd brn dol LS GRNST & m-dkbrn lmy sl alg DOL GRNST,scat CHT frag,occ ANHY xl,tt-tr intxl-rr alg POR,fr dull-bri yel FLOR,tr-fr ltbrn-rr dkbrn STN,fr mod fast stmg CUT"
8190.00	8200.00	"DOL brn-dkbrn,micxl-vfxl,gran-micsuc,rthy-sl slty,occ LS rich cmt,pred DOL GRNST,scat LS-DOL PKST,v sl alg,scat CHT frag AA,tr-fr intxl-rr alg POR,fr dull-bri yel FLOR,tr-fr ltbrn-rr dkbrn STN,fr mod fast stmg CUT"
8200.00	8220.00	"LS tan-brn,crpxl-vfxl,occ cln-dns,sl dol,intbd LS PKST & GRNST w/v thn intbd lmy mbrn-gybrn DOL GRNST,sl anhy-rr ANHY incl-xl,trnsl-wh-bf CHT frag,tt-fr intxl-v rr alg POR,fr dull yel FLOR,tr lt-mbrn STN,tr-fr mod fast CUT"
8220.00	8240.00	"LS AA,decr DOL GRNST & CHT frag,sl incr LS GRSTN POR,FLOR-STN-CUT AA"
8240.00	8250.00	"LS AA,w/intbd DOL AA,incr trnsl-wh-bf CHT frag,decr POR-FLOR-STN-CUT"
8250.00	8260.00	"LS tan-brn,occ crm,crpxl-micxl,occ vfxl-micsuc,pred LS PKST,w/intbd brn dol LS GRNST & m-dkbrn lmy sl alg DOL GRNST,scat CHT frag,occ ANHY xl,tt-tr intxl-rr alg POR,fr dull-bri yel FLOR,tr-fr ltbrn-rr dkbrn STN,fr mod fast stmg CUT"
8260.00	8270.00	"LS AA,decr CHT frag,occ ANHY xl-incl,occ POR fl,scat thn brn-mbrn DOL GRNST incl,tt-tr intxl-v rr alg POR,fr-g dull yel FLOR,tr lt-dkbrn STN,fr mod fast CUT"

DEPTH		LITHOLOGY
8270.00	8280.00	"LS tan-brn,occ mbrn,crpxl-micxl,v rr micsuc-gran,pred LS PKST,thn intbd sl dol LS GRNST & lmy DOL GRNST,sl alg,chty,pred tt-fr intxl-v rr alg POR,fr dull yel FLOR,spty-tr m-dkbrn STN,fr mod fast CUT"
8280.00	8300.00	"LS tan-brn,occ mbrn,crpxl-micxl,occ vfxl-gran,v sl alg,anhy ip,sl dol cmt,pred LS PKST,bcmg LS GRNST,w/intbd & grdg lmy sl alg DOL GRNST,scat CHT frag,rr-fr intxl-v rr alg POR,fr dull yel FLOR,tr lt-dkbrn-v rr blk STN,tr mod fast stmg CUT"
8300.00	8310.00	"LS tan-brn,occ ltgy-offwh,crpxl-micxl,rr vfxl-gran,pred slty arg LS PKST,v rr thn LS GRNST & arg lmy DOL,tt-v rr intxl POR,tr dull yel FLOR,n-v rr ltbrn STN,n-rr fr stmg CUT"
8310.00	8320.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8331.00	8340.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8340.00	8350.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8360.00	8370.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8370.00	8380.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8380.00	8391.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8391.00	8400.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8410.00	8420.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8420.00	8430.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8440.00	8450.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8450.00	8460.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8470.00	8480.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"
8480.00	8490.00	"LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"

DEPTH	LITHOLOGY

8499.00 8510.00 "LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"

8510.00 8521.00 "LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"

8521.00 8530.00 "LS lt-mbrn,crpxl-micxl,occ vfxl,micsuc ip,rthy,anhy,dol,incr LS GRNST,scat lt-mbrnlmy DOL GRNST,rr CHT frag,tt-tr intxl-v rr alg POR,n-fr dull yel FLOR,rr-tr lt-dkbrn STN,tr of fr mod fast CUT"

8530.00 8550.00 "LS tan-ltbrn,occ ltgy,crpxl-micxl,v rr vfxl,pred LS PKST,w/stks LS GRNST & v rr v thn mbrn-gybrn DOL GRNST incl,chty-tr trnsl-bf-wh mot CHT frag,v rr ANHY xl-incl,tt-tr intxl POR,tr-fr dull yel FLOR,rr-tr ltbrn STN,tr of fr mod fast CUT"

8550.00 8570.00 "LS AA,pred sl dol-sl anhy LS PKST,occ wh-chk,incr trnsl-ltgy-brn,occ mot CHT frag,tt-fr intxl POR,fr dull yel FLOR,rr spty brn STN,n-v rr blk dd o STN,tr of fr slow-mod fast CUT"

8570.00 8580.00 "LS AA,v chty sl dol LS PKST,w/v rr v thn gybrn-brn lmy DOL GRNST incl-lams,tt-tr intxl POR,fr dull yel FLOR,rr dkbrn STN,n-v rr spty blk dd o STN,rr slow-mod fast CUT"

8580.00 8600.00 "LS tan-ltbrn,occ ltgy,crpxl-micxl,v rr vfxl,pred LS PKST,w/stks LS GRNST sl dol,chty-tr trnsl-bf-wh mot CHT frag,v rr ANHY xl-incl,tt-tr intxl POR,tr-fr dull yel FLOR,rr-tr ltbrn STN,tr of fr slow-mod fast CUT"

8600.00 8610.00 "LS tan-ltbrn,occ wh,crpxl-micxl,n-v rr micsuc,chky-rthy ip,pred LS PKST,w/v rr stks LS GRNST sl dol,chty-tr trnsl-bf-wh mot CHT frag,v rr ANHY xl-incl,tt-rr intxl POR,tr dull yel FLOR,rr ltbrn STN,rr fr slow-mod fast CUT"

8610.00 8630.00 "LS tan,occ trnsl-brn,wh ip,crpxl-micxl,v rr micsuc,rthy-chk ip,v sl anhy,occ dol,tr-fr amnt trnsl-bf,mot gy-wh CHT frag,tt-v rr intxl POR,tr dull yel FLOR,rr spty lt-dkbrn STN,v rr blk dd o STN,tr of fr slow-mod fast CUT,*NOTE:OIL EMULITION CONTAMINATION"

8630.00 8640.00 "LS AA,decr CHT frag,occ scat mic fos,tt-tr intxl POR,tr dull yel FLOR,rr spty dkbrn-brn STN,v rr spty blk dd o STN,fr slow-fast CUT"

8640.00 8650.00 "LS AA,decr CHT frag,occ scat mic fos,POR-FLOR-STN-CUT AA"

8650.00 8660.00 "LS tan-ltbrn,occ ltgy,crpxl-micxl,v rr vfxl,pred LS PKST,w/stks LS GRNST sl dol,chty-tr trnsl-bf-wh mot CHT frag,v rr ANHY xl-incl,tt-tr intxl POR,tr-fr dull yel FLOR,rr-tr ltbrn STN,tr of fr slow-mod fast CUT"

8660.00 8670.00 "LS AA,incr CHT frag,occ scat mic fos,decr POR-FLOR-STN-CUT AA"

8670.00 8680.00 "LS tan-ltbrn,occ wh,crpxl-micxl,v rr vfxl,chky ip,pred LS PKST,w/stks LS GRNST sl dol,chty-tr trnsl-bf-wh mot CHT frag,v rr ANHY xl-incl,tt-fr intxl POR,tr-fr dull yel FLOR,rr-tr ltbrn STN,tr of fr slow-mod fast CUT"

8680.00 8690.00 "LS AA,incr-pred chty,occ chk-plty LS PKST,abnt CHT frag AA,decr POR,tr-fr dull yel FLOR,STN-CUT AA"

8690.00 8700.00 "LS AA,decr CHT frag,occ scat mic fos,POR-FLOR-STN-CUT AA"

DEPTH	LITHOLOGY

8700.00 8710.00 "LS AA,rr plty-chk,decr CHT frag,occ scat mic fos,tt-tr intxl POR,tr dull yel FLOR,rr spty dkbrn-brn STN,v rr spty blk dd o STN,fr slow-fast CUT"

8710.00 8720.00 "LS tan,occ trnsl-brn,wh ip,crpxl-micxl,v rr micsuc,rthy-chk ip,rr plty,v sl anhy,rr dol,rr-tr trnsl-bf,mot gy-wh CHT frag,tt-v rr intxl POR,tr dull yel FLOR,rr spty lt-dkbrn STN,v rr blk dd o STN,tr of fr slow-mod fast CUT"

8720.00 8730.00 "LS AA,scat mic fos,rr trnsl-clr-bf CHT frag,POR-FLOR-STN-CUT AA"

8730.00 8740.00 "LS AA,scat mic fos,rr trnsl-clr-bf CHT frag,POR-FLOR-STN-CUT AA"

8740.00 8750.00 "LS tan,occ trnsl-brn,wh ip,crpxl-micxl,v rr micsuc,rthy-chk ip,v sl anhy,rr dol,rr-tr trnsl-bf,mot gy-wh CHT frag,tt-v rr intxl POR,tr dull yel FLOR,rr spty lt-dkbrn STN,v rr blk dd o STN,tr of fr slow-mod fast CUT"

8750.00 8760.00 "LS AA,scat mic fos,rr trnsl-clr-bf CHT frag,POR-FLOR-STN-CUT AA"

8760.00 8770.00 "LS AA,scat mic fos,rr trnsl-clr-bf CHT frag,POR-FLOR-STN-CUT AA"

8770.00 8780.00 "LS tan,occ trnsl-brn,wh ip,crpxl-micxl,v rr micsuc,rthy-chk ip,v sl anhy,rr dol,rr-tr trnsl-bf,mot gy-wh CHT frag,tt-v rr intxl POR,tr dull yel FLOR,rr spty lt-dkbrn STN,v rr blk dd o STN,tr of fr slow-mod fast CUT"

8780.00 8790.00 "LS AA,scat mic fos,rr trnsl-clr-bf CHT frag,POR-FLOR-STN-CUT AA"

8790.00 8800.00 "LS tan,occ trnsl-brn,wh ip,crpxl-micxl,v rr micsuc,rthy-chk ip,v sl anhy,rr dol,rr-tr trnsl-bf,mot gy-wh CHT frag,tt-v rr intxl POR,tr dull yel FLOR,rr spty lt-dkbrn STN,v rr blk dd o STN,tr of fr slow-mod fast CUT"

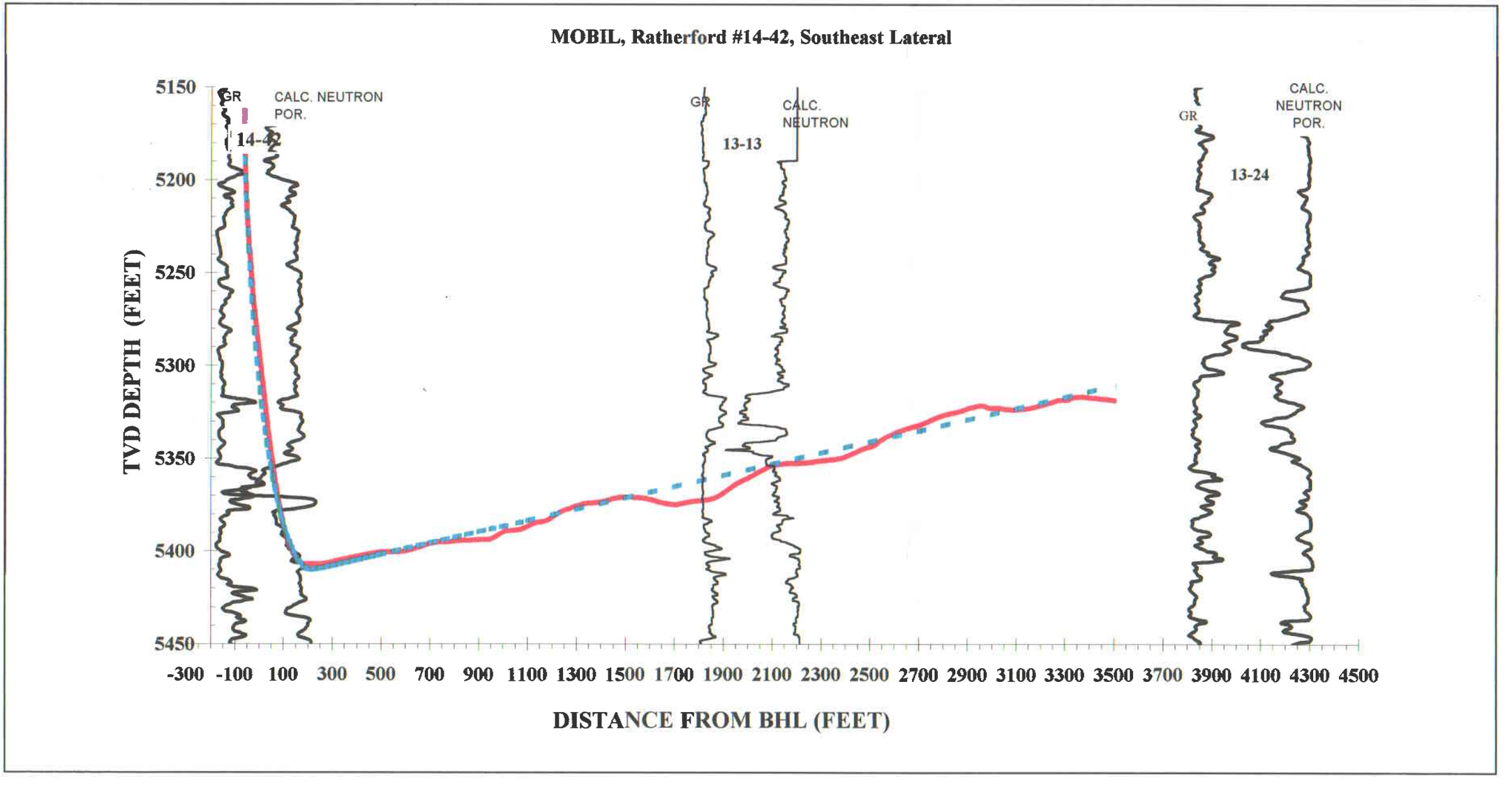
8810.00 8820.00 "LS AA,scat mic fos,rr trnsl-clr-bf CHT frag,POR-FLOR-STN-CUT AA"

8820.00 8830.00 "LS tan,occ trnsl-brn,wh ip,crpxl-micxl,v rr micsuc,rthy-chk ip,v sl anhy,rr dol,rr-tr trnsl-bf,mot gy-wh CHT frag,tt-v rr intxl POR,tr dull yel FLOR,rr spty lt-dkbrn STN,v rr blk dd o STN,tr of fr slow-mod fast CUT"

8830.00 8850.00 "LS AA,scat mic fos,rr trnsl-clr-bf CHT frag,POR-FLOR-STN-CUT AA"

8850.00 8860.00 "LS tan,occ trnsl-brn,wh ip,crpxl-micxl,v rr micsuc,rthy-chk ip,v sl anhy,rr dol,rr-tr trnsl-bf,mot gy-wh CHT frag,tt-v rr intxl POR,tr dull yel FLOR,rr spty lt-dkbrn STN,v rr blk dd o STN,tr of fr slow-mod fast CUT"

ROCKY MOUNTAIN GEO-ENGINEERING CORP. 2450 INDUSTRIAL BLVD. GRAND JUNCTION, CO 81505 (970) 243-3044



Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE (See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-247A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other INJECTOR/SIDETRACK

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other SIDETRACK

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

8. FARM OR LEASE NAME, WELL NO.: RATHERFORD 14-W-42

2. NAME OF OPERATOR: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.

9. API WELL NO.: 43-037-15860

3. ADDRESS AND TELEPHONE NO.: P.O. Box 633, Midland, TX 79702 (915) 688-2585

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements)**
At surface: SE/NE 1976' & 653' FEL
At top prod. interval reported below: 131' FSL & 146' FEL
At total depth: 1971' SOUTH & 2894' EAST

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: SEC. 14, T41S, R23E

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
		SAN JUAN	UTAH

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
4-24-97	5-12-97	05-27-97	4564' RKB, 4553' GR	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
8860'MD/5318VD	5448'		→	X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*: LATERAL 1A1 (5547'TMD-5407'TVD)(8860'TMD-5318'TVD)

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN: MUD LOG 5-27-97

27. WAS WELL CORED: NO

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8"		82'			
8 5/8" J55	24#	1277'		SURFACE	
5 1/2" J55	14#	5371'		4690' CALC	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	5584'	5018'

31. PERFORATION RECORD (*Interval, size and number*)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5590-8860'TMD	ACIDIZE W/26500 GALS 15% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping - size and type of pump*)	WELL STATUS (*Producing or shut-in*)
		INJECTOR

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS - OIL RATIO
06-29-97						4278	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)
2000	0					

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: DIRECTIONAL SURVEY REPORT

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Shirley Hourihan TITLE ENV. & REG. TECHNICIAN DATE 07-15-97

RECEIVED
JUL 21 1997
DIV. OF OIL, GAS & MINING

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

UTAH
NATURAL RESOURCES
OIL, GAS AND MINING

3 Triad Center, Suite 350, Salt Lake City, UT 84180-120

Ph. (801)538-534(

MONTHLY REPORT OF ENHANCED RECOVERY PROJECT - PART 2

MONTHLY MONITORING OF INJECTION WELLS

Well Name	Inj. Press.	Inj. Rate	Annulus Press.	Monthly Inj. Vol.
9W41-43-037-16399 ✓	SI	SI		SI
9W43 43-037-16400 ✓	SI	SI		SI
10W21 43-037-16401 ✓	SI	SI		SI
10W23 43-037-16402 ✓	1250	270		7548
10W43 43-037-16403 ✓	1225	24		6605
11W44 43-037-15842 ✓	2300	235		6581
12W13 43-037-16404 ✓	2350	114		3180
12W22 43-037-15845 ✓	300	618		17,313
12W24 43-037-31151 New 2/21/87 ✓	0	559		4469
12W31 43-037-15847 ✓	0	485		13,589
12W33 43-037-15848 ✓	150	447		12,503
12W42 43-037-15850 ✓	1700	532		14,887
12W44 43-037-16405 ✓	SI	SI		SI
13W11 43-037-31152 New 2/20/87 ✓	0	287		2584
13W22 43-037-15852 New 2/23/87	0	391		2349
13W24 43-037-15853 New 2/3/87	0	332		8638
13W32 43-037-16406 2/2/87	Converted to a producing oil well			
13W42 43-037-15854 ✓	1850	365		10,211
13W44 43-037-16407 ✓	2300	165		4609
14W42 43-037-15860 New 2/27/87	0	353		707
14W43 43-037-16410 ✓	SI	SI		SI
15W21 43-037-16411 ✓	1075	302		8446

Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE (See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-247A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

8. FARM OR LEASE NAME, WELL NO.: RATHERFORD 14-W-42

9. API WELL NO.: 43-037-15860

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: SEC. 14, T41S, R23E

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ Other INJECTOR/SIDETRACK

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other SIDETRACK

2. NAME OF OPERATOR: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.

3. ADDRESS AND TELEPHONE NO.: P.O. Box 633, Midland, TX 79702 (915) 688-2585

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: SE/NE 1976' & 653' FEL
At top prod. interval reported below: 131' FSL & 146' FEL
At total depth: 1971' SOUTH & 2894' EAST

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
		SAN JUAN	UTAH

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
4-24-97	5-12-97	05-27-97	4564' RKB, 4553' GR	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY →	ROTARY TOOLS	CABLE TOOLS
8860'MD/5318VD	5448'			X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*: LATERAL 1A1 (5547'TMD-5407'TVD)(8860'TMD-5318'TVD)

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN: MUD LOG 5-27-97

27. WAS WELL CORED: NO

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8"		82'			
8 5/8" J55	24#	1277'		SURFACE	
5 1/2" J55	14#	5371'		4690' CALC	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	5584'	5018'

31. PERFORATION RECORD (*Interval, size and number*)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5590-8860'TMD	ACIDIZE W/26500 GALS 15% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping - size and type of pump*)	WELL STATUS (*Producing or shut-in*)
		INJECTOR

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS - OIL RATIO
06-29-97						4278	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)
2000	0					

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: DIRECTIONAL SURVEY REPORT

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Shirley Hawkins TITLE ENV. & REG. TECHNICIAN DATE 07-15-97

RECEIVED
JUL 21 1997
DIV OF OIL, GAS & MINING

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

08/15/97
JRB

DRILLED FOOTAGE CALCULATION FOR DIRECTIONAL AND HORIZONTAL WELLS

Well Name: **Ratherford 14-W-42**
Surface Location: **1976' FNL, 653' FEL, 14-41S-23**

First leg description:	Lateral #1
KOP MD:	5135.00
KOP TVD:	5134.07
EOL MD:	8860.00
EOL TVD:	5318.48
Footage drilled:	3725.00
Second leg description:	
KOP MD:	
KOP TVD:	
EOL MD:	
EOL TVD:	
Footage drilled:	0.00
Third leg description:	
KOP MD:	
KOP TVD:	
EOL MD:	
EOL TVD:	
Footage drilled:	0.00
Fourth leg description:	
KOP MD:	
KOP TVD:	
EOL MD:	
EOL TVD:	
Footage drilled:	0.00

Total Footage Drilled (MD):	***3725.00***
Deepest point (TVD):	***5406.97***

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-247A
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: 14-W-42
9. API Well No.: 43-037-15860
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other INJECTOR / SIDETRACT
2. Name of Operator: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.
3. Address and Telephone No.: P.O. Box 633, Midland, TX 79702 915-688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 1976' FNL 653' FEL SEC.14, T41S, R23E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other SIDETRACK	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

LATERAL #1 1971' SOUTH & 2894' EAST FROM SURFACE SPOT ZONE 1d-1c-1b.

SEE ATTACHMENTS

RECEIVED
JUL 21 1997
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed [signature] Title ENV. & REG. TECHNICIAN Date 7-14-97

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

ATTACHMENT - FORM 3160-5
RATHERFORD UNIT #14-W-42
14-20-603-247A
NAVAJO TRIBAL
SAN JUAN, UTAH

04-24-97	NOTIFIED MELVIN CAPITAN W/NAVAJO EPA ON 4-22-97, INTENT TO LINE DIRT PIT; CAPITAN ON LOCATION ON 4-23-97 TO PERFORM VISUAL INSPECTION OF LINER. MESSAGE W/JIM THOMPSON @ UTAH OIL & GAS 4-23-97 OF INTENT TO BEGIN OPERATIONS; MESSAGE W/BLM ON 4-23-97 OF INTENT TO BEGIN OPERATIONS. MIRU NAVAJO WEST RIGH #15. 450# ON WELL, BLEED DOWN TO PIT. ND WELLHEAD, NU BOPS, TEST BOP TO 250 PSI LOW, 750 PSI HIGH FOR 15 MIN. OK. UNSET OTIS PKR. POOH W/TBG & PKR, RIH W/BIT & SCRAPER TO 5371'. CIRC. WELL POOH LAY DOWN TBG.
04-25-97	RU BASIN WL TRUCK, RUN GR/CNL/CCL F/5400-4900'. POOH, PU RBP, RIH & SET @ 5290'. LOSE SETTING TOOL IN HOLE, TAG ON BOTTOM @ 5279'. RIH W/OVERSHOT ON TBG. POOH, NO FISH. SDFN.
04-26-97	PU WEATHERFORD 4 AA/16" OVERSHOT W/3 A/8" GRAPPLE, RIH W/169 JTS TBG. LATCH ONTO FISH, POOH & STAND BACK TBG. TIH W/TBG. POOH & LD. ND BOP, CUT OFF CSG. PULL UP 5.5 CSG. CHANGE OUT HEAD, SET NEW SLIPS W/70K. NU TBG SPOOL, TEST TO 1000 PSI.
04-27-97	RDMO PU. CLEAN LOCATION FOR DRILLING RIG. PREP. WORK COMPLETE.

DRILLING

04-30-97	NOTIFED JIM THOMPSON W/UTAH OIL & GAS; MIRU NAVAJO WEST 25.
05-01-97	FIN RU RIG, NU, BOP, TEST BOP, 2000# HIGH & 200# LOS PRESS TEST, HELD OK. RIH & RET RBP @ 5290' , POH, RIH & SET TIW WHIPSTOCK PKR @ 5151', RIH W/TIW KEYWAY LATCH, ASS, RUN GYRO, GYRO TOOL FACE & PKR KEYWAY @ 315 DEG. POH W/LATCH ASS. FINAL REPORT RE-ENTRY.
05-02-97	RIH W/WHIPSTOCK, MILL WINDOW W/STARTER MILL F/5135-5135, CIRC HOLE CLEAN, POH W/MILL RIH W/WINDOW & WATERMELLON ON SAME BHA, MILL WINDOW F/5135-5142. LATERAL #1.
05-03-97	RIH W/CURVE DRILLING ASSEMBLY, TIME DRILL 5143-5185, SLIDE DRILL LATERAL 1A1 CURVE F/5185-5275'.
05-04-97	SLIDE & ROTATE DRILL LATERAL 1A1 F/5275-5547, TD CURVE 1A1 @ 90.5 DEG. ANGLE, 126 DEG. DIRECTION 5407 TVD. 192' VS. FIH POH & LD CURVE DRILLING ASSEMBLY..
05-05-97	RIH W/LATERAL DRILL ASSEMBLY, SLIDE & ROTATE DRILL LATERAL 1A1 F/5547-6100'.
05-06-97	SLIDE & ROTATE DRILL LATERAL 1A1 F/6100-6500'.
05-07-97	SLIDE & ROTATE DRILL LATERAL 1A1 F/6500-7260'.
05-08-97	SLIDE DRILL LATERAL 1A1 F/7260-7411'.
05-09-97	LATERAL 1A1, SWIVEL UP & REAM F/5430-5461', WIH TO 7316' F/7316-7411', H2S ALERT, SLIDE/ROTATE DRILL F/7411-7872'.
05-10-97	SLIDE & ROTATE DRILL LATERAL 1A1 F/7872-8333', SHORT TRIP/CLEAN UP HOLE.
05-11-97	SLIDE & ROTATE DRILL LATERAL 1A1 F/8333-8760'.
05-12-97	SLIDE & ROTATE DRILL LATERAL 1A18760-8860' TD, PROJ SURVEY 89.2 DEG. 178.6 AZ, TVD 5318', VERTICAL SEC. 3500'. POOH TO TOP OF CURVE, POOH LAY DOWN DRILL PIPE.
05-13-97	CLEAN PITS, RDMO BIG 1 #25 WO/COMPLETION.

ATTACHMENT - FORM 3160-5
RATHERFORD UNIT #14-W-42
14-20-603-247A
NAVAJO TRIBAL
SAN JUAN, UTAH
PAGE 2

COMPLETION

05-14-97	MOVE IN RIG UP NAVAJO WEST RIG #15, RIG DOWN WELL HEAD CAP. NIPPLE UP BOPE. UNLOAD & TALLY 195 JOINTS OF 2.875" TBG. PICK UP RETV. HEAD FOR BRIDGE PLUG. RIH TO 5012'. RIG UP PUMP & PIT. SIFN.
05-15-97	SIP @ 7:30 WAS 0 PSI. RIH TO 5014'. LATCH ON TO BRIDGE PLUG. POH LAY DOWN, RIH W/TAILPIPE, PKR, & 2.875" TBG. TO 5584' CIRC. SET PACKER @ 5018', TEST TO 500 PSI. OK. RIG DOWN NAVAJO WEST RIG #15.
05-16-97	MOVE OFF RIG, PREP TO ACIDIZE LATERAL 1A1.
05-17-97	MIRU COILED TBG. UNIT, SHUT IN TBG. PRESURE @ 3:00 WAS 150 PSI, TEST PUMPS & LINES TO 3000 PSI. OK. RIH W/1.5" COILED TBG. TO 8860'. ACIDIZE OPEN HOLE FORMATION F/8860-5590' W/26,500 GAL OF 15 % HCL ACID. SHUT WELL IN, POOH W/COILED TBG, RIG DOWN UNIT. FLOW WELL 8 HOURS. RECOVER 460 BBLS OF FLUID. SI.
05-23-97	MIRU NAVAJO WEST RIG #15, 300 PSI ON TBG. FLOW WELL BACK TO PIT, PUMP 10# BRINE DOWN TBG, UNSET PKR, EQUALIZE FLUID, SWI & SDFN.
05-24-97	POOH W/20 STDS TBG, RIG BREAK DOWN, REPAIR RIG, SDFN.
05-25-97	FINISH POOH W/PKR, LD SAME. PU RETRIEVING TOOL, RIH, LATCH ONTO WHIPSTOCK, SHEAR FREE OUT OF PERM PKR W/75K, POOH W/WHIPSTOCK, LD TBG. SWIFN, READY TO RUN INJ. EQUIP.
05-27-97	WELL DEAD. PU GUIB. PKR & INJ EQUIP. RU POWER TONGS, RIH W/INJ EQUIP. RIH W/CMT LINED TBG. SET PKR @ 5070'. W/12K COMP. CIRC PKR FLUID, TEST PKR OK TO 1100 PSI FOR 30 MIN. SDFN.
05-28-97	RDMO BIG A RIG #15.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR MOBIL PRODUCING TX & NM, INC.

ADDRESS P. O. BOX 633
MIDLAND, TEXAS 79702

OPERATOR ACCT. NO. N 7370

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
		06280	43-037-15860	RATHERFORD 14-W-42	SE/NE	14	41S	23E	SAN JUAN	4-24-97	6-29-97

WELL 1 COMMENTS: Entity OK. fee

WELL 2 COMMENTS:

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

ACTION CODES (See Instructions on back of form)
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

Shirley Houchins
Signature SHIRLEY HOUCHINS
ENV. & REG. TECH
Title
8-6-97
Date
Phone No. (915) 688-2585

sperry-sun DRILLING SERVICES

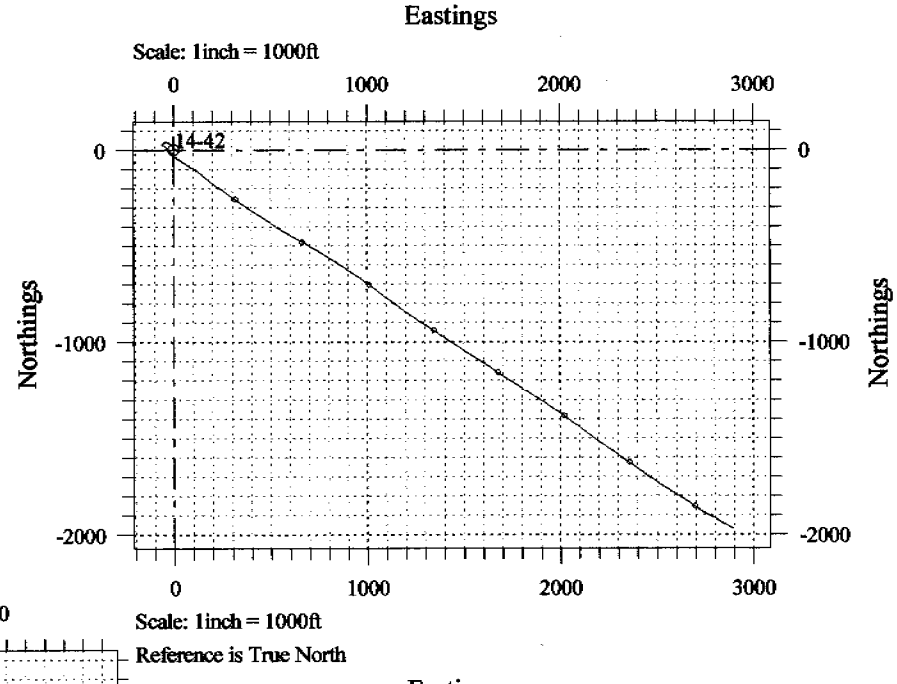
Well: 14-42

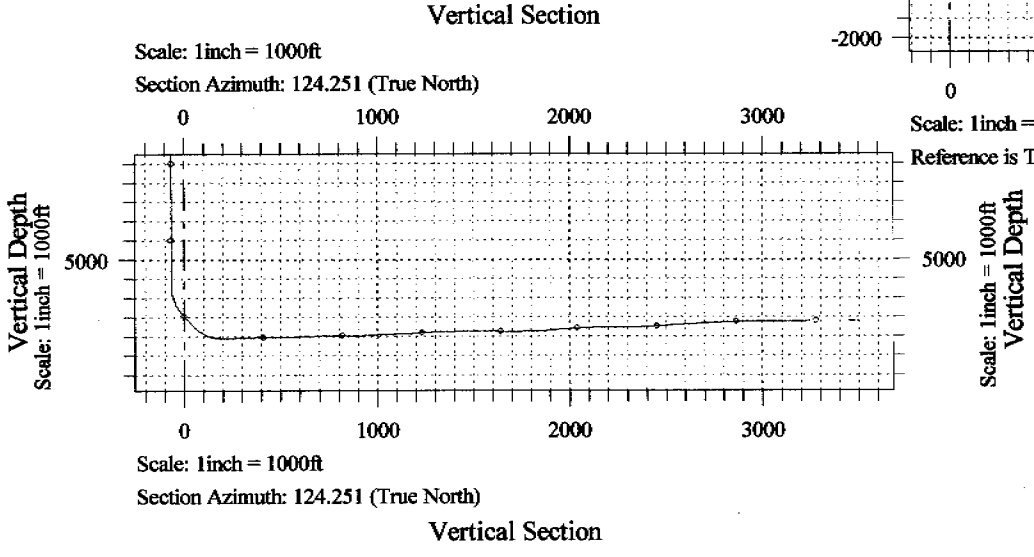
14-W-42

DrillQuest

Customer: Mobil
Folder: Mobil
Field: San Juan County
Project: Utah
Structure: Ratherford Unit
Well: 14-42

Mobil





Prepared:	Checked:	Approved:

sperry-sun

DRILLING SERVICES

A DRESSER INDUSTRIES, INC. COMPANY

Mobil
San Juan County
Utah
Ratherford Unit
14-42 - MWD Survey

SURVEY REPORT

16 May, 1997

Survey Ref: svy1685

Sperry-Sun Drilling Services

Survey Report for 14-42

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
Gyro							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
MWD Survey							
100.00	1.010	15.840	99.99	0.85 N	0.24 E	-0.28	1.010
300.00	1.060	14.330	299.96	4.34 N	1.18 E	-1.47	0.028
500.00	0.970	357.320	499.93	7.82 N	1.56 E	-3.11	0.157
700.00	1.360	341.120	699.89	11.76 N	0.71 E	-6.03	0.253
900.00	1.490	328.650	899.83	16.22 N	1.41 W	-10.30	0.168
1100.00	1.770	314.430	1099.75	20.61 N	4.97 W	-15.70	0.245
1300.00	1.620	314.840	1299.66	24.76 N	9.18 W	-21.52	0.075
1500.00	1.560	312.220	1499.58	28.58 N	13.20 W	-27.00	0.047
1700.00	1.380	312.220	1699.52	32.03 N	17.00 W	-32.08	0.090
1900.00	1.370	313.020	1899.46	35.28 N	20.53 W	-36.83	0.011
2100.00	1.220	314.990	2099.41	38.42 N	23.78 W	-41.28	0.078
2300.00	1.010	285.870	2299.37	40.41 N	26.99 W	-45.05	0.298
2500.00	1.140	280.690	2499.34	41.26 N	30.64 W	-48.54	0.081
2700.00	1.020	284.590	2699.30	42.07 N	34.31 W	-52.04	0.070
2900.00	1.210	279.010	2899.26	42.85 N	38.12 W	-55.63	0.109
3100.00	1.060	266.380	3099.23	43.07 N	42.05 W	-59.00	0.145
3300.00	0.960	252.850	3299.19	42.46 N	45.50 W	-61.51	0.129
3500.00	0.730	239.370	3499.17	41.31 N	48.20 W	-63.09	0.151
3700.00	0.830	234.950	3699.15	39.83 N	50.48 W	-64.14	0.058
3900.00	0.810	225.810	3899.13	38.01 N	52.68 W	-64.94	0.066
4100.00	0.720	220.910	4099.12	36.08 N	54.52 W	-65.37	0.056
4300.00	0.720	217.040	4299.10	34.13 N	56.10 W	-65.58	0.024
4500.00	0.400	219.850	4499.09	32.59 N	57.30 W	-65.70	0.161
4700.00	0.660	226.650	4699.08	31.26 N	58.59 W	-66.02	0.134
4900.00	0.410	243.130	4899.07	30.15 N	60.06 W	-66.61	0.146
5100.00	0.440	244.110	5099.07	29.49 N	61.39 W	-67.34	0.015
5135.00	0.340	218.240	5134.07	29.35 N	61.58 W	-67.42	0.571
5143.00	3.380	135.910	5142.06	29.16 N	61.43 W	-67.19	41.895
5153.00	5.200	134.820	5152.03	28.63 N	60.90 W	-66.45	18.217
5163.00	7.500	133.730	5161.97	27.86 N	60.11 W	-65.36	23.031
5173.00	9.900	132.640	5171.86	26.82 N	59.00 W	-63.87	24.055
5183.00	12.000	131.550	5181.67	25.55 N	57.59 W	-61.99	21.101
5193.00	14.300	130.460	5191.41	24.06 N	55.87 W	-59.73	23.132
5203.00	16.800	129.370	5201.04	22.34 N	53.82 W	-57.06	25.169
5213.00	19.500	128.280	5210.54	20.39 N	51.39 W	-53.95	27.212

Continued...

Sperry-Sun Drilling Services

Survey Report for 14-42

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5223.00	22.800	127.200	5219.87	18.19 N	48.54 W	-50.35	33.228
5233.00	25.800	129.100	5228.98	15.64 N	45.30 W	-46.25	30.999
5243.00	28.700	131.200	5237.87	12.69 N	41.81 W	-41.70	30.548
5253.00	31.400	133.500	5246.53	9.31 N	38.11 W	-36.74	29.349
5263.00	33.900	135.900	5254.95	5.51 N	34.28 W	-31.44	28.150
5273.00	36.100	138.600	5263.14	1.30 N	30.39 W	-25.85	26.900
5283.00	38.600	138.900	5271.09	3.26 S	26.39 W	-19.98	25.066
5293.00	40.700	137.500	5278.79	8.02 S	22.13 W	-13.78	22.820
5303.00	42.200	136.200	5286.28	12.80 S	17.56 W	-7.31	21.371
5313.00	42.600	135.300	5293.67	17.59 S	12.82 W	-0.69	4.056
5323.00	43.000	137.600	5301.00	22.52 S	8.14 W	5.95	16.130
5333.00	43.200	137.100	5308.31	27.54 S	3.51 W	12.60	3.959
5343.00	43.100	133.600	5315.60	32.41 S	1.30 E	19.31	23.956
5353.00	42.300	129.900	5322.95	36.92 S	6.35 E	26.03	26.333
5363.00	42.100	125.900	5330.36	41.05 S	11.65 E	32.73	26.940
5373.00	44.200	124.100	5337.66	44.97 S	17.25 E	39.57	24.341
5383.00	46.700	122.900	5344.67	48.90 S	23.20 E	46.69	26.421
5393.00	48.200	121.600	5351.44	52.83 S	29.43 E	54.06	17.796
5403.00	49.100	122.300	5358.04	56.80 S	35.80 E	61.56	10.422
5413.00	51.000	123.400	5364.46	60.96 S	42.24 E	69.22	20.787
5423.00	53.700	123.700	5370.57	65.33 S	48.83 E	77.14	27.104
5433.00	56.700	123.000	5376.28	69.85 S	55.69 E	85.35	30.545
5443.00	58.900	120.900	5381.61	74.32 S	62.87 E	93.80	28.279
5453.00	61.600	120.200	5386.57	78.74 S	70.35 E	102.46	27.675
5463.00	65.000	120.600	5391.06	83.26 S	78.05 E	111.37	34.187
5473.00	69.200	121.300	5394.95	87.99 S	85.95 E	120.57	42.492
5483.00	72.500	121.800	5398.23	92.94 S	94.00 E	130.00	33.336
5493.00	75.500	123.200	5400.99	98.10 S	102.10 E	139.61	32.879
5503.00	78.500	124.400	5403.24	103.52 S	110.20 E	149.35	32.197
5516.00	82.400	126.600	5405.39	110.96 S	120.63 E	162.17	34.328
5531.00	87.700	130.100	5406.69	120.23 S	132.35 E	177.06	42.290
5547.00	90.300	130.400	5406.97	130.57 S	144.55 E	192.97	16.358
5573.33	89.900	128.700	5406.92	147.33 S	164.86 E	219.19	6.633
5605.10	90.600	126.200	5406.78	166.65 S	190.08 E	250.91	8.172
5636.93	91.700	125.200	5406.14	185.22 S	215.92 E	282.72	4.670
5668.63	91.600	126.200	5405.23	203.71 S	241.65 E	314.40	3.169
5700.38	91.700	126.400	5404.32	222.50 S	267.23 E	346.11	0.704
5731.56	91.600	124.600	5403.42	240.60 S	292.60 E	377.27	5.779
5763.41	91.600	125.500	5402.53	258.88 S	318.66 E	409.10	2.825
5795.21	91.200	125.000	5401.75	277.23 S	344.63 E	440.89	2.013
5826.04	91.500	122.700	5401.03	294.40 S	370.22 E	471.71	7.521
5857.24	90.500	123.400	5400.48	311.41 S	396.37 E	502.90	3.912
5889.04	89.900	123.200	5400.37	328.87 S	422.95 E	534.69	1.989
5920.87	90.200	122.900	5400.34	346.23 S	449.63 E	566.51	1.333
5951.97	91.500	123.200	5399.88	363.19 S	475.69 E	597.60	4.290

Continued...

Sperry-Sun Drilling Services

Survey Report for 14-42

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5983.85	92.100	123.600	5398.88	380.73 S	502.29 E	629.46	2.262
6015.65	92.700	123.600	5397.55	398.31 S	528.76 E	661.23	1.887
6047.54	92.500	123.200	5396.10	415.84 S	555.35 E	693.09	1.401
6079.29	90.800	120.300	5395.19	432.54 S	582.34 E	724.79	10.584
6111.18	89.700	118.800	5395.05	448.27 S	610.08 E	756.57	5.833
6143.08	91.400	119.400	5394.74	463.78 S	637.95 E	788.34	5.651
6174.85	90.800	121.100	5394.13	479.78 S	665.38 E	820.02	5.674
6206.49	89.000	121.100	5394.19	496.13 S	692.48 E	851.62	5.689
6230.27	92.100	122.200	5393.96	508.60 S	712.72 E	875.37	13.832
6269.36	88.700	120.600	5393.69	528.96 S	746.07 E	914.40	9.613
6301.24	92.200	122.300	5393.44	545.59 S	773.26 E	946.24	12.205
6333.00	95.400	122.700	5391.33	562.62 S	799.99 E	977.91	10.154
6364.75	92.100	122.000	5389.25	579.57 S	826.75 E	1009.57	10.624
6396.47	89.600	122.000	5388.78	596.37 S	853.64 E	1041.26	7.881
6428.27	92.700	122.900	5388.15	613.43 S	880.47 E	1073.03	10.151
6460.11	94.900	123.600	5386.04	630.85 S	907.04 E	1104.79	7.249
6491.91	91.000	123.600	5384.40	648.42 S	933.48 E	1136.54	12.264
6523.76	91.500	124.100	5383.70	666.16 S	959.93 E	1168.38	2.220
6555.56	96.200	126.900	5381.57	684.57 S	985.75 E	1200.09	17.192
6587.37	92.800	126.900	5379.07	703.61 S	1011.11 E	1231.77	10.688
6619.09	93.400	127.600	5377.36	722.78 S	1036.32 E	1263.40	2.904
6650.87	93.000	127.300	5375.58	742.08 S	1061.51 E	1295.08	1.572
6682.72	90.800	126.300	5374.53	761.14 S	1087.00 E	1326.88	7.587
6714.51	90.900	126.200	5374.06	779.94 S	1112.63 E	1358.64	0.445
6746.26	91.000	125.900	5373.53	798.62 S	1138.30 E	1390.37	0.996
6778.04	92.100	126.000	5372.67	817.27 S	1164.01 E	1422.13	3.476
6809.79	92.500	126.700	5371.40	836.07 S	1189.56 E	1453.83	2.538
6840.78	90.300	123.400	5370.64	853.86 S	1214.92 E	1484.80	12.795
6871.75	89.800	123.600	5370.61	870.96 S	1240.75 E	1515.77	1.739
6902.72	89.400	123.700	5370.83	888.12 S	1266.53 E	1546.74	1.331
6934.47	88.800	123.700	5371.33	905.73 S	1292.94 E	1578.48	1.890
6966.21	87.600	123.400	5372.32	923.26 S	1319.38 E	1610.20	3.897
6997.96	88.100	123.700	5373.52	940.80 S	1345.82 E	1641.93	1.836
7029.72	89.000	123.200	5374.32	958.30 S	1372.31 E	1673.67	3.241
7061.62	89.400	123.700	5374.76	975.88 S	1398.92 E	1705.57	2.007
7093.40	93.300	124.800	5374.02	993.76 S	1425.18 E	1737.33	12.750
7125.13	90.300	124.400	5373.02	1011.76 S	1451.28 E	1769.04	9.538
7156.93	90.900	124.100	5372.69	1029.66 S	1477.57 E	1800.84	2.109
7188.75	90.600	122.900	5372.27	1047.22 S	1504.10 E	1832.65	3.887
7220.52	93.800	123.700	5371.05	1064.65 S	1530.63 E	1864.39	10.382
7252.31	94.600	122.900	5368.72	1082.05 S	1557.13 E	1896.09	3.554
7284.06	95.600	122.000	5365.90	1099.02 S	1583.81 E	1927.70	4.230
7315.82	94.000	122.200	5363.24	1115.84 S	1610.62 E	1959.32	5.077
7347.56	94.400	122.700	5360.92	1132.82 S	1637.33 E	1990.96	2.014
7379.31	93.400	123.700	5358.76	1150.17 S	1663.84 E	2022.63	4.449

Continued...

Sperry-Sun Drilling Services

Survey Report for 14-42

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7397.53	93.700	123.400	5357.63	1160.22 S	1678.99 E	2040.82	2.326
7429.33	94.400	123.700	5355.38	1177.75 S	1705.43 E	2072.53	2.394
7460.18	91.900	123.400	5353.69	1194.77 S	1731.10 E	2103.33	8.162
7491.38	91.000	123.400	5352.90	1211.94 S	1757.14 E	2134.52	2.885
7523.19	90.400	123.200	5352.51	1229.40 S	1783.72 E	2166.32	1.988
7555.04	89.800	122.700	5352.46	1246.73 S	1810.45 E	2198.16	2.452
7586.91	90.400	123.000	5352.40	1264.01 S	1837.22 E	2230.02	2.105
7618.78	91.200	123.200	5351.96	1281.42 S	1863.92 E	2261.88	2.587
7650.52	91.100	122.900	5351.32	1298.72 S	1890.52 E	2293.61	0.996
7682.31	90.400	123.200	5350.90	1316.06 S	1917.16 E	2325.39	2.396
7714.21	91.200	123.900	5350.46	1333.69 S	1943.74 E	2357.28	3.332
7745.31	92.400	124.400	5349.48	1351.14 S	1969.47 E	2388.37	4.180
7777.20	93.700	125.200	5347.78	1369.31 S	1995.62 E	2420.21	4.785
7809.16	93.300	125.000	5345.83	1387.65 S	2021.72 E	2452.11	1.399
7840.11	93.400	125.700	5344.02	1405.53 S	2046.92 E	2483.00	2.281
7871.83	93.700	126.400	5342.06	1424.16 S	2072.51 E	2514.64	2.397
7903.61	94.100	126.700	5339.90	1443.04 S	2097.98 E	2546.32	1.572
7934.59	94.200	126.900	5337.66	1461.55 S	2122.73 E	2577.19	0.720
7966.45	93.200	125.900	5335.60	1480.42 S	2148.32 E	2608.96	4.434
7998.20	92.400	125.500	5334.05	1498.92 S	2174.07 E	2640.66	2.816
8029.96	91.800	123.600	5332.88	1516.92 S	2200.21 E	2672.40	6.270
8061.78	92.400	125.200	5331.72	1534.89 S	2226.44 E	2704.20	5.367
8093.64	93.600	125.000	5330.05	1553.18 S	2252.47 E	2736.01	3.818
8125.47	93.500	125.200	5328.08	1571.45 S	2278.47 E	2767.78	0.701
8157.32	92.100	125.300	5326.52	1589.81 S	2304.44 E	2799.58	4.407
8189.10	91.800	125.500	5325.44	1608.21 S	2330.33 E	2831.34	1.134
8220.91	92.000	125.900	5324.39	1626.76 S	2356.15 E	2863.12	1.405
8252.75	92.300	125.900	5323.19	1645.42 S	2381.93 E	2894.92	0.942
8284.45	91.900	126.000	5322.03	1664.01 S	2407.57 E	2926.59	1.301
8316.20	90.200	126.000	5321.45	1682.67 S	2433.25 E	2958.32	5.354
8348.00	88.400	125.000	5321.84	1701.14 S	2459.14 E	2990.11	6.475
8379.72	88.700	124.100	5322.64	1719.12 S	2485.25 E	3021.81	2.990
8411.47	89.200	123.900	5323.22	1736.87 S	2511.57 E	3053.56	1.696
8443.21	90.000	123.200	5323.45	1754.41 S	2538.02 E	3085.29	3.349
8474.96	90.400	122.500	5323.33	1771.63 S	2564.70 E	3117.03	2.539
8506.58	91.300	122.300	5322.87	1788.57 S	2591.39 E	3148.63	2.916
8537.56	91.900	122.700	5322.00	1805.21 S	2617.51 E	3179.59	2.327
8569.34	92.500	122.500	5320.78	1822.32 S	2644.26 E	3211.33	1.990
8601.26	92.000	122.300	5319.53	1839.41 S	2671.19 E	3243.21	1.687
8633.07	92.000	122.200	5318.42	1856.38 S	2698.08 E	3274.98	0.314
8664.84	91.600	121.600	5317.42	1873.16 S	2725.04 E	3306.71	2.269
8696.60	90.700	120.900	5316.78	1889.63 S	2752.18 E	3338.42	3.590
8728.36	89.600	120.600	5316.70	1905.87 S	2779.48 E	3370.12	3.590
8760.16	89.100	120.200	5317.06	1921.96 S	2806.90 E	3401.84	2.014
8791.91	89.200	119.500	5317.53	1937.76 S	2834.44 E	3433.50	2.227

Continued...

Sperry-Sun Drilling Services

Survey Report for 14-42

Mobil **Utah**
San Juan County **Ratherford Unit**

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8823.73	89.200	118.600	5317.97	1953.21 S	2862.25 E	3465.18	2.828
8860.00	89.200	118.600	5318.48	1970.57 S	2894.09 E	3501.27	0.000

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to Structure. Northings and Eastings are relative to Structure.

The Dogleg Severity is in Degrees per 100ft.
Vertical Section is from Well and calculated along an Azimuth of 124.251° (True).
Coordinate System is UT-S. Grid Convergence at Surface is -4.170°.

Based Upon Minimum Curvature type calculations, at a Measured Depth of 8860.00ft.,
The Bottom Hole Displacement is 3501.27ft., in the Direction of 124.251° (True).

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-247A
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: RATHERFORD 14-W-42
9. API Well No.: 43-037-15860
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other
2. Name of Operator: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM
3. Address and Telephone No.: P.O. Box 633, Midland TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 14, T41S, R23E
(SE/NE) 1976' FNL & 653' FEL
LAT #1 1971' SOUTH & 2894' EAST F/SURFACE SPOT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other MIT CHART	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

SEE ATTACHED CHART.

RECEIVED
MAY 14 1999
DIV. OF OIL, GAS & MINING

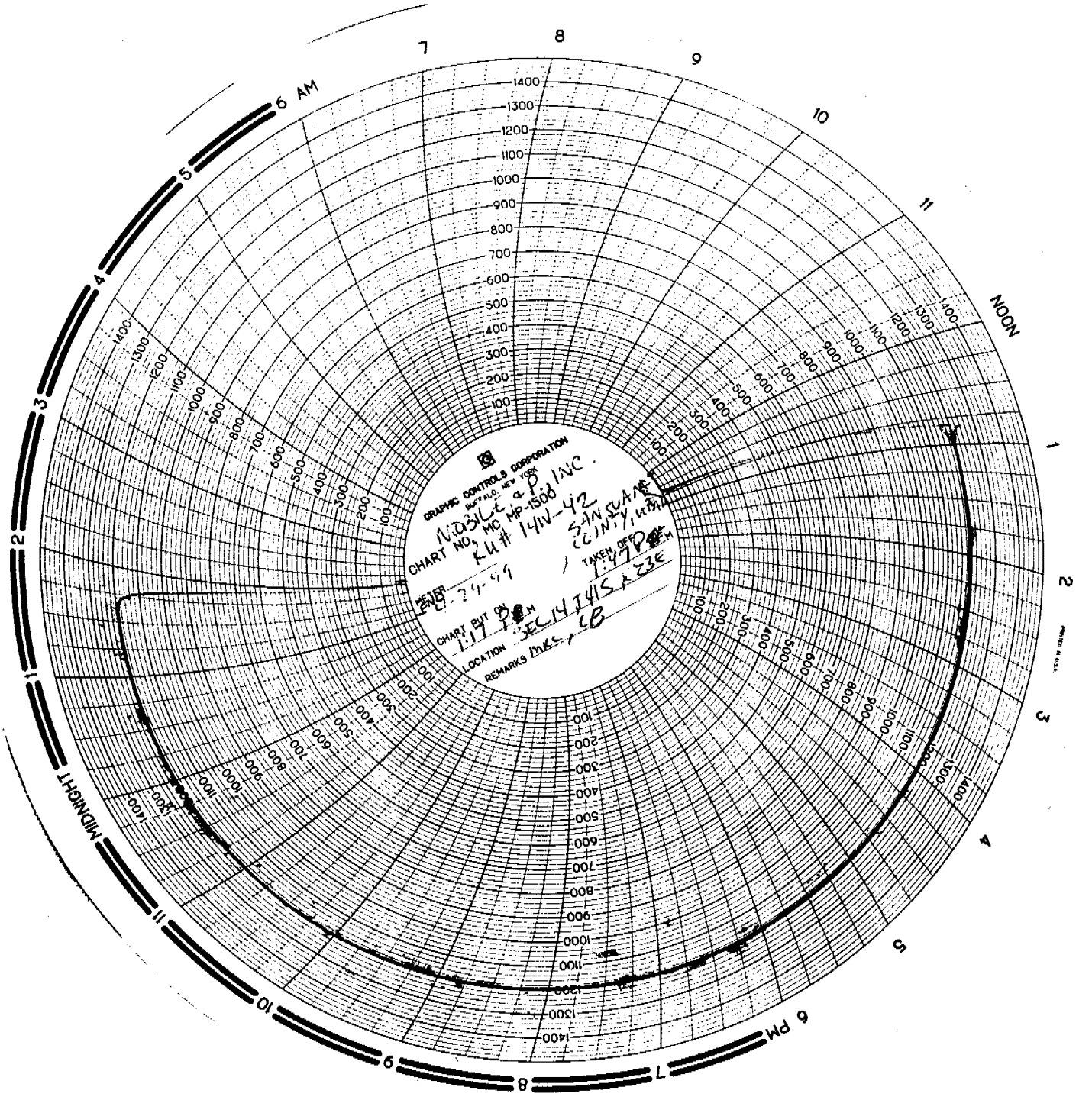
14. I hereby certify that the foregoing is true and correct
Signed [signature] Title SHIRLEY HOUCHINS/ENV & REG TECH Date 5-11-99

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side


GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. MC MP-1500
METER
CHART PUT ON
LOCATION
REMARKS
TAKEN OFF
NOON
MIDNIGHT
6 AM
6 PM

ExxonMobil Production Comp
U.S. West
P.O. Box 4358
Houston, Texas 77210-4358

June 27, 2001

ExxonMobil
Production

Mr. Jim Thompson
State of Utah, Division of Oil, Gas and Mining
1549 West North Temple
Suite 1210
Salt Lake City, UT 84114-5801

Change of Name – Mobil Oil Corporation to
ExxonMobil Oil Corporation

Dear Mr. Thompson

Effective June 1, 2001, Mobil Oil Corporation (MOC) changed its name to ExxonMobil Oil Corporation (EMOC). This was a name change only; EMOC is the same corporation as Mobil Oil Corporation, but with a new name. No facility or other asset was transferred from one corporation to another by virtue of the name change. Specifically, EMOC will remain the owner and operator of its existing exploration and production oil and gas properties and facilities, as well as relevant permits.

There is no change to the name of Exxon Mobil Corporation, the ultimate shareholder of EMOC.

Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

The Federal Identification Number for MOC (13-5401570) will remain the same for EMOC.

A copy of the Certification, Bond Rider and a list of wells are attached.

If you have any questions please feel free to call Joel Talavera at 713-431-1010

Very truly yours,

Charlotte H. Harper

Charlotte H. Harper
Permitting Supervisor

ExxonMobil Production Company
a division of Exxon Mobil Corporation,
acting for ExxonMobil Oil Corporation

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
XXXXXXXXXXXXXXXX
Navajo Area Office
NAVAJO REGION
P.O. Box 1060
Gallup, New Mexico 87305-1060

IN REPLY REFER TO:

RRES/543

AUG 30 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Charlotte H. Harper, Permitting Supervisor
Exxon Mobil Production Company
U. S. West
P. O. Box 4358
Houston, TX 77210-4358

Dear Ms. Harper:

This is to acknowledge receipt of your company's name change from Mobil Oil Corporation to ExxonMobil Oil Corporation effective June 1, 2001. The receipt of documents includes the Name Change Certification, current listing of Officers and Directors, Listing of Leases, Financial Statement, filing fees of $75.00 and a copy of the Rider for Bond Number 8027 31 97. There are no other changes.

Please note that we will provide copies of these documents to other concerned parties. If you need further assistance, you may contact Ms. Bertha Spencer, Realty Specialist, at (928) 871-5938.

Sincerely,

DENNIS DENETSONE

Regional Realty Officer

cc: BLM, Farmington Field Office w/enclosures
Navajo Nation Minerals Office, Attn: Mr. Akhtar Zaman, Director/w enclosures

MINERAL RESOURCES
ADM
NATV AM ENV COORD
SOLID MIN TEAM
PETRO MGMT TEAM
O & G INSPECT TEAM
ALL TEAM LEADERS
LAND RESOURCES
ENVIRONMENT
FILES

ExxonMobil Production Company
U.S. West
P.O. Box 4358
Houston, Texas 77210-4358

POR 7/12/2001
GW
543
File

June 27, 2001

ExxonMobil
Production

Certified Mail
Return Receipt Requested

Ms. Genni Denetsone
United States Department of the Interior
Bureau of Indian Affairs, Navajo Region
Real Estate Services
P. O. Box 1060
Gallup, New Mexico 87305-1060
Mail Code 543

Change of Name –
Mobil Oil Corporation to
ExxonMobil Oil Corporation

Dear Ms. Denetsone:

Effective June 1, 2001, Mobil Oil Corporation (MOC) changed its name to ExxonMobil Oil Corporation (EMOC). This was a name change only; EMOC is the same corporation as Mobil Oil Corporation, but with a new name. No facility or other asset was transferred from one corporation to another by virtue of the name change. Specifically, EMOC will remain the owner and operator of its existing exploration and production oil and gas properties and facilities, as well as relevant permits.

There is no change to the name of Exxon Mobil Corporation, the ultimate shareholder of EMOC.

Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

The Federal Identification Number for MOC (13-5401570) will remain the same for EMOC.

Attached is the Name Change Certification, Current listing of Officers and Directors, Filing Fee of $75/-, Listing of Leases, Financial Statement and a copy of the Rider for Bond number 8027 31 97. The original Bond Rider has been sent to Ms. Barbar Davis at your Washington Office.

If you have any questions , please contact Alex Correa at (713) 431-1012.

Very truly yours,

Charlotte H. Harper

Charlotte H. Harper
Permitting Supervisor

Attachments

ExxonMobil Production Company
a division of Exxon Mobil Corporation,
acting for ExxonMobil Oil Corporation

NOTE: Check forwarded to Ella Jossie

Bureau of Indian Affairs
Navajo Region Office
Attn: RRES - Mineral and Mining Section
P.O. Box 1060
Gallup, New Mexico 87305-1060

Gentlemen:

The current listing of officers and director of ExxonMobil Oil Corporation (Name of Corporation), of New York (State) is as follows:

OFFICERS

President	F.A. Risch	Address	5959 Las Colinas Blvd. Irving, TX 75039
Vice President	K.T. Koonce	Address	800 Bell Street Houston, TX 77002
Secretary	F.L. Reid	Address	5959 Las Colinas Blvd. Irving, TX 75039
Treasure	B.A. Maher	Address	5959 Las Colinas Blvd. Irving, TX 75039

DIRECTORS

Name	D.D. Humphreys	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	P.A. Hanson	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	T.P. Townsend	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	B.A. Maher	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	F.A. Risch	Address	5959 Las Colinas Blvd. Irving, TX 75039

Sincerely,

Alex Correa

This is to certify that the above information pertaining to ExxonMobil Oil Corporation (Corporation) is trust and correct as evidenced by the records and accounts covering business for the State of Utah and in the custody of Corporation Service Company (Agent), Phone: 1 (800)927-9800, whose business address is One Utah Center, 201 South Main Street, Salt Lake City, Utah 84111-2218

(CORPORATE SEAL)

Signature

AGENT AND ATTORNEY IN FACT
Title

SAL

CERTIFICATION

I, the undersigned Assistant Secretary of ExxonMobil Oil Corporation. (formerly Mobil Oil Corporation), a corporation organized and existing under the laws of the State of New York, United States of America, DO HEREBY CERTIFY, That, the following is a true and exact copy of the resolutions adopted by the Board of Directors on May 22, 2001:

CHANGE OF COMPANY NAME

WHEREAS, the undersigned Directors of the Corporation deem it to be in the best interest of the Corporation to amend the Certificate of Incorporation of the Corporation to change the name and principal office of the Corporation:

NOW THEREFORE BE IT RESOLVED, That Article 1st relating to the corporate name is hereby amended to read as follows:

"1st The corporate name of said Company shall be,

ExxonMobil Oil Corporation",

FURTHER RESOLVED, That the amendment of the Corporation's Certificate of Incorporation referred to in the preceding resolutions be submitted to the sole shareholder of the Corporation entitled to vote thereon for its approval and, if such shareholder gives its written consent, pursuant to Section 803 of the Business Corporation Law of the State of New York, approving such amendment, the proper officers of the Corporation be, and they hereby are, authorized to execute in the name of the Corporation the Certificate of Amendment of Certificate of Incorporation, in the form attached hereto;

FURTHER RESOLVED, That the proper officers of the Corporation be and they hereby are authorized and directed to deliver, file and record in its behalf, the Certificate of Amendment of Certificate of Incorporation, and to take such action as may be deemed necessary or advisable to confirm and make effective in all respects the change of this Company's name to EXXONMOBIL OIL CORPORATION.

WITNESS, my hand and the seal of the Corporation at Irving, Texas, this 8th day of June, 2001.

S. A. Millican
Assistant Secretary

COUNTY OF DALLAS)
STATE OF TEXAS)
UNITED STATES OF AMERICA)
Sworn to and subscribed before me at Irving, Texas, U. S. A. on this the 8th day of June, 2001.

Janice M. Phillips
Notary Public

LISTING OF LEASES OF MOBIL OIL CORPORATION

	Lease Number
1)	14-20-0603-6504
2)	14-20-0603-6505
3)	14-20-0603-6506
4)	14-20-0603-6508
5)	14-20-0603-6509
6)	14-20-0603-6510
7)	14-20-0603-7171
8)	14-20-0603-7172A
9)	14-20-600-3530
10)	14-20-603-359
11)	14-20-603-368
12)	14-20-603-370
13)	14-20-603-370A
14)	14-20-603-372
15)	14-20-603-372A
16)	14-20-603-4495
17)	14-20-603-5447
18)	14-20-603-5448
19)	14-20-603-5449
20)	14-20-603-5450
21)	14-20-603-5451

6/1/01

CHUBB GROUP OF INSURANCE COMPANIES

[illegible] South, Suite 1400, Houston, Texas 77027-3301
[illegible] 927-4600 • Facsimile: (713) 297-4750

NW Bond

FEDERAL INSURANCE COMPANY RIDER
to be attached to and form a part of

BOND NO 8027 31 97
wherein
Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc. is named as Principal and

FEDERAL INSURANCE COMPANY AS SURETY,

in favor of **United States of America, Department of the Interior Bureau of Indian Affairs**

in the amount of **$150,000.00**
bond date: 11/01/65

IT IS HEREBY UNDERSTOOD AND AGREED THAT effective **June 1, 2001** the name of the Principal is changed

FROM: **Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc.**

TO : **ExxonMobil Oil Corporation**

All other terms and conditions of this Bond are unchanged.

Signed, sealed and dated this **12th** of **June, 2001.**

ExxonMobil Oil Corporation

By : _____

FEDERAL INSURANCE COMPANY

By: Mary Pierson
Mary Pierson, Attorney-in-fact

Chubb Surety	POWER OF ATTORNEY	Federal Insurance Company Vigilant Insurance Company Pacific Indemnity Company	Attn.: Surety Department 15 Mountain View Road Warren, NJ 07059

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint R.F. Bobo,

Mary Pierson, Philana Berros, and Jody E. Specht of Houston, Texas----------

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 10th day of May, 2001.

Kenneth C. Wendel, Assistant Secretary

Frank E. Robertson, Vice President

STATE OF NEW JERSEY }
County of Somerset } ss.

On this 10th day of May, 2001, before me, a Notary Public of New Jersey, personally came Kenneth C. Wendel, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Kenneth C. Wendel being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By-Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with Frank E. Robertson, and knows him to be Vice President of said Companies; and that the signature of Frank E. Robertson, subscribed to said Power of Attorney is in the genuine handwriting of Frank E. Robertson, and was thereto subscribed by authority of said Companies and in deponent's presence.

Karen A. Price
Notary Public State of New Jersey
No. 2231647
Commission Expires Oct. 28, 2004

Karen A. Price
Notary Public

CERTIFICATION

Extract from the By-Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Kenneth C. Wendel, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

(i) the foregoing extract of the By-Laws of the Companies is true and correct,
(ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U. S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U. S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
(iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this 12th day of June, 2001.

Kenneth C. Wendel, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY
Telephone (908) 903-3485 Fax (908) 903-3656 e-mail: surety@chubb.com

15-10-0225 (Ed. 4-99) CONSENT

F010601000187

CSC 45

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

OF

MOBIL OIL CORPORATION

(Under Section 805 of the Business Corporation Law)

Pursuant to the provisions of Section 805 of the Business Corporation Law, the undersigned President and Secretary, respectively, of Mobil Oil Corporation hereby certify:

FIRST: That the name of the corporation is MOBIL OIL CORPORATION and that said corporation was incorporated under the name of Standard Oil Company of New York.

SECOND: That the Certificate of Incorporation of the corporation was filed by the Department of State, Albany, New York, on the 10th day of August, 1882.

THIRD: That the amendments to the Certificate of Incorporation effected by this Certificate are as follows:

(a) Article 1st of the Certificate of Incorporation, relating to the corporate name, is hereby amended to read as follows:

"1st The corporate name of said Company shall be,

ExxonMobil Oil Corporation",

(b) Article 7th of the Certificate of Incorporation, relating to the office of the corporation is hereby amended to read as follows:

The office of the corporation within the State of New York is to be located in the County of Albany. The Company shall have offices at such other places as the Board of Directors may from time to time determine.

FOURTH: That the amendments to the Certificate of Incorporation were authorized by the Board of Directors followed by the holder of all outstanding shares entitled to vote on amendments to the Certificate of Incorporation by written consent of the sole shareholder dated May 22, 2001.

IN WITNESS WHEREOF, this Certificate has been signed this 22nd Day of May, 2001.

F. A. Risch, President

STATE OF TEXAS)
COUNTY OF DALLAS)

F. L. REID, being duly sworn, deposes and says that he is the Secretary of MOBIL OIL CORPORATION, the corporation mentioned and described in the foregoing instrument; that he has read and signed the same and that the statements contained therein are true.

F. L. REID, Secretary

SUBSCRIBED AND SWORN TO before me, the undersigned authority, on this the 22nd day of May, 2001.

[SEAL]

NOTARY PUBLIC, STATE OF TEXAS

JANICE M. PHILLIPS
MY COMMISSION EXPIRES
May 16, 2002

CSC 5184334741 06/01 '01 09:01 NO.411 02/02
CSC 06/01 '01 09:06 NO.133 04/04

F010601000187

CSC 45

CERTIFICATE OF AMENDMENT

OF

MOBIL OIL CORPORATION

Under Section 805 of the Business Corporation Law

100 cc

STATE OF NEW YORK
DEPARTMENT OF STATE
FILED JUN 01 2001
TAX $ SRC
BY: NY Albany

Filed by: EXXONMOBIL CORPORATION
(Name)

5959 Las Colinas Blvd.
(Mailing address)

Irving, TX 75039-2298
(City, State and Zip code)

Cust Ref # 1655781MPS

RECEIVED
JUL 05 2001
CORPORATE REAL ESTATE SERVICES

010601000195

State of New York }
Department of State } *ss:*

I hereby certify that the annexed copy has been compared with the original document in the custody of the Secretary of State and that the same is a true copy of said original.

Witness my hand and seal of the Department of State on JUN 01 2001

STATE OF NEW YORK
DEPARTMENT OF STATE

Special Deputy Secretary of State

DOS-1266 (7/00)

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. GLH
2. CDW
3. FILE

Change of Operator (Well Sold) — Designation of Agent

X Operator Name Change — Merger

The operator of the well(s) listed below has changed, effective: **06-01-2001**

FROM: (Old Operator):	**TO:** (New Operator):
MOBIL EXPLORATION & PRODUCTION	EXXONMOBIL OIL CORPORATION
Address: P O BOX DRAWER "G"	Address: U S WEST P O BOX 4358
CORTEZ, CO 81321	HOUSTON, TX 77210-4358
Phone: 1-(970)-564-5212	Phone: 1-(713)-431-1010
Account No. N7370	Account No. N1855

CA No. **Unit:** **RATHERFORD**

WELL(S)

NAME	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
RATHERFORD 14-W-42	14-41S-23E	43-037-15860	6280	INDIAN	WI	A
RATHERFORD UNIT 14-31	14-41S-23E	43-037-31717	6280	INDIAN	WI	A
24-31	24-41S-23E	43-037-15862	6280	INDIAN	WI	A
24-42	24-41S-23E	43-037-15863	6280	INDIAN	WI	A
6-14	06-41S-24E	43-037-15984	6280	INDIAN	WI	A
7-12	07-41S-24E	43-037-15985	6280	INDIAN	WI	A
7-14	07-41S-24E	43-037-15986	6280	INDIAN	WI	A
7-34	07-41S-24E	43-037-15989	6280	INDIAN	WI	A
NAVAJO B41-7 (RATHERFORD 7-41)	07-41S-24E	43-037-15990	99990	INDIAN	WI	A
8-14	08-41S-24E	43-037-15992	6280	INDIAN	WI	A
RATHERFORD 8W43	08-41S-24E	43-037-16396	99996	INDIAN	WI	A
NAVAJO B-5 (RATHERFORD 9-43)	09-41S-24E	43-037-16400	99990	INDIAN	WI	I
NAVAJO B-6 (RATHERFORD 10W21)	10-41S-24E	43-037-16401	99990	INDIAN	WI	I
NAVAJO B-2 (RATHERFORD 10W23)	10-41S-24E	43-037-16402	99990	INDIAN	WI	I
NAVAJO W-2 (RATHERFORD 10W43)	10-41S-24E	43-037-16403	99990	INDIAN	WI	I
NAVAJO A-11 (RATHERFORD 15W21)	15-41S-24E	43-037-16411	99990	INDIAN	WI	I
NAVAJO A-19 (RATHERFORD 15W23)	15-41S-24E	43-037-16412	99990	INDIAN	WI	I
NAVAJO A-24 (RATHERFORD 15W43)	15-41S-24E	43-037-16413	99990	INDIAN	WI	I
16-12	16-41S-24E	43-037-15720	6280	INDIAN	WI	A
16-14	16-41S-24E	43-037-15721	6280	INDIAN	WI	A

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 06/29/2001
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 06/29/2001
3. The new company has been checked through the **Department of Commerce, Division of Corporations Database on:** 04/09/2002
4. Is the new operator registered in the State of Utah: YES Business Number: 579865-0143
5. If **NO**, the operator was contacted contacted on: N/A

6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BIA-06/01/01

7. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 06/01/2001

8. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: N/A

9. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: N/A
NOTE: EPA ISSUES UIC PERMIT

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 04/10/2002
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 04/10/2002
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: N/A

STATE WELL(S) BOND VERIFICATION:

1. State well(s) covered by Bond Number: N/A

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: N/A

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 80273197

FEE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number N/A
2. The **FORMER** operator has requested a release of liability from their bond on: N/A
The Division sent response by letter on: N/A

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

COMMENTS:

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **6/1/2006**

FROM: (Old Operator):	**TO:** (New Operator):
N1855-ExxonMobil Oil Corporation	N2700-Resolute Natural Resources Company
PO Box 4358	1675 Broadway, Suite 1950
Houston, TX 77210-4358	Denver, CO 80202
Phone: 1 (281) 654-1936	Phone: 1 (303) 534-4600

CA No. **Unit:** **RATHERFORD (UIC)**

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/21/2006
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/24/2006
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 6/7/2006
4. Is the new operator registered in the State of Utah: YES Business Number: 5733505-0143
5. If **NO**, the operator was contacted contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: requested

6b. Inspections of LA PA state/fee well sites complete on: n/a

6c. Reports current for Production/Disposition & Sundries on: ok

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM n/a BIA not yet
8. **Federal and Indian Units:** The BLM or BIA has approved the successor of unit operator for wells listed on: not yet
9. **Federal and Indian Communization Agreements ("CA"):** The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/12/2006

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 6/22/2006
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 6/22/2006
3. Bond information entered in RBDMS on: n/a
4. Fee/State wells attached to bond in RBDMS on: n/a
5. Injection Projects to new operator in RBDMS on: 6/22/2006
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: n/a
2. Indian well(s) covered by Bond Number: PA002769
3. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a

a. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on: n/a

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number	API Number
See attached list	Attached
Location of Well	**Field or Unit Name**
Footage : See attached list County : San Juan	Ratherford Unit
QQ, Section, Township, Range: State : UTAH	**Lease Designation and Number** See attached list

EFFECTIVE DATE OF TRANSFER: 6/1/2006

CURRENT OPERATOR

Company: Exxon Mobil Oil Corporation
Address: PO Box 4358
city Houston state TX zip 77210-4358
Phone: (281) 654-1936
Name:
Signature:
Title:
Date:
Comments: Exxon Mobil has submitted a separate, signed copy of UIC Form 5

NEW OPERATOR

Company: Resolute Natural Resources Company
Address: 1675 Broadway, Suite 1950
city Denver state CO zip 80202
Phone: (303) 534-4600
Name: Dwight E Mallory
Signature:
Title: Regulatory Coordinator
Date: 4/20/2006
Comments: A list of affected UIC wells is attached.
New bond numbers for these wells are:
BIA Bond # PA002769 and US EPA Bond # B001252

(This space for State use only)

Transfer approved by:
Title: Field Operations Manager
Approval Date: 6/12/06

Comments:

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APR 24 2006
DIV. OF OIL, GAS & MINING

(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: See attached list
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo Tribe
7. UNIT or CA AGREEMENT NAME: Ratherford Unit
8. WELL NAME and NUMBER: See attached list
9. API NUMBER: Attached
10. FIELD AND POOL, OR WILDCAT: Greater Aneth

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Unit Agreement

2. NAME OF OPERATOR: Resolute Natural Resources Company N2700

3. ADDRESS OF OPERATOR: 1675 Broadway, Suite 1950 CITY Denver STATE CO ZIP 80202 PHONE NUMBER: (303) 534-4600

4. LOCATION OF WELL
FOOTAGES AT SURFACE: See attached list COUNTY: San Juan
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective June 1, 2006 Exxon Mobil Oil Corporation resigns as operator of the Ratherford Unit. Also effective June 1, 2006 Resolute Natural Resources Company is designated as successor operator of the Ratherford Unit.

A list of affected producing and water source wells is attached. A separate of affected injection wells is being submitted with UIC Form 5, Transfer of Authority to Inject.

As of the effective date, bond coverage for the affected wells will transfer to BIA Bond # PA002769.

NAME (PLEASE PRINT) Dwight E Mallory TITLE Regulatory Coordinator

SIGNATURE D.E. Mallory DATE 4/20/2006

(This space for State use only)

APPROVED 6/27/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

RECEIVED
APR 24 2006
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ship Rock

7. UNIT or CA AGREEMENT NAME: UTU68931A

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Injection

8. WELL NAME and NUMBER: Ratherford

2. NAME OF OPERATOR: ExxonMobil Oil Corporation N1855

9. API NUMBER: attached

3. ADDRESS OF OPERATOR: P.O. Box 4358 CITY Houston STATE TX ZIP 77210-4358

PHONE NUMBER: (281) 654-1936

10. FIELD AND POOL, OR WILDCAT: Aneth

4. LOCATION OF WELL

FOOTAGES AT SURFACE:

COUNTY: San Juan

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 6/1/2006	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

ExxonMobil Oil Corporation is transferring operatorship of Greater Aneth field, Ratherford lease to Resolute Natural Resources Company. All change of operator notices should be made effective as of 7:00 AM MST on June 1, 2006.

Attached please find a listing of injection wells included in the transfer.

NAME (PLEASE PRINT) Laurie Kilbride TITLE Permitting Supervisor

SIGNATURE Laurie S. Kilbride DATE 4/19/2006

(This space for State use only) APPROVED 6/27/06

Earlene Russell

Division of Oil, Gas and Mining

Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

RECEIVED

APR 21 2006

DIV. OF OIL, GAS & MINING

(5/2000)

GREATER ANETH FIELD UIC WELL LIST
Ratherford lease, San Juan County, Utah

Reg Lease Name	Well ID	API Num	Status	Reg Lease #	Surface Location						
					Qtr 1	Qtr 2	Sec	TN	RNG	NS Foot	EW Foot
RATHERFORD UNIT	1W24	430371583900S1	Shut-in	14-20-603-246A	NE	SE	1	41S	23E	0651FSL	3300FEL
RATHERFORD UNIT	2W44	430371638600S1	Active	14-20-603-246A	SE	SE	2	41S	23E	0810FSL	0510FEL
RATHERFORD UNIT	11W42	430371584100S1	Active	14-20-603-246A	SE	NE	11	41S	23E	3290FSL	4617FWL
RATHERFORD UNIT	11W44	430371584200S1	Shut-in	14-20-603-246A	SE	SE	11	41S	23E	0660FSL	0558FEL
RATHERFORD UNIT	12W11	430371584300S1	Active	14-20-603-246A	NW	NW	12	41S	23E	0678FNL	4620FEL
RATHERFORD UNIT	12W13	430371640400S1	Active	14-20-603-246A	NW	SW	12	41S	23E	1980FSL	4620FEL
RATHERFORD UNIT	12W22	430371584501S1	Active	14-20-603-246A	SE	NW	12	41S	23E	1920FNL	2080FWL
RATHERFORD UNIT	12W24	430373115101S1	Active	14-20-603-246A	SE	SW	12	41S	23E	0775FSL	1980FWL
RATHERFORD UNIT	12W31	430371584700S1	Active	14-20-603-246A	NW	NE	12	41S	23E	0661FNL	1981FEL
RATHERFORD UNIT	12W33	430371584800S1	Active	14-20-603-246A	NW	SE	12	41S	23E	1958FSL	3300FEL
RATHERFORD UNIT	12W42	430371585000S1	Active	14-20-603-246A	SE	NE	12	41S	23E	3275FSL	0662FEL
RATHERFORD UNIT	12W44A	430373154300S1	Shut-in	14-20-603-246A	SE	SE	12	41S	23E	0772FSL	0807FEL
RATHERFORD UNIT	13W11	430373115201S1	Active	14-20-603-247A	NW	NW	13	41S	23E	0500FNL	0660FWL
RATHERFORD UNIT	13W13	430371585100S1	Active	14-20-603-247A	NW	SW	13	41S	23E	1980FSL	4620FEL
RATHERFORD UNIT	13W22	430371585200S1	Active	14-20-603-247A	SE	NW	13	41S	23E	1988FNL	3300FEL
RATHERFORD UNIT	13W24	430371585300S1	Active	14-20-603-247A	SE	SW	13	41S	23E	0660FSL	3300FEL
RATHERFORD UNIT	13W33	430371585501S1	Active	14-20-603-247A	NW	SE	13	41S	23E	1970FSL	1979FEL
RATHERFORD UNIT	13W42	430371585700S1	Shut-in	14-20-603-247A	SE	NE	13	41S	23E	2139FNL	0585FEL
RATHERFORD UNIT	13W44	430371640700S1	Active	14-20-603-247A	SE	SE	13	41S	23E	0653FSL	0659FEL
RATHERFORD UNIT	14-31	430373171700S1	Active	14-20-603-247A	NW	NE	14	41S	23E	0754FNL	1604FEL
RATHERFORD UNIT	14W42	430371586001S1	Active	14-20-603-247A	SE	NE	14	41S	23E	1976FNL	653FEL
RATHERFORD UNIT	24W31	430371586200S1	Shut-in	14-20-603-247A	NW	NE	24	41S	24E	0560FNL	1830FEL
RATHERFORD UNIT	24W42	430371586300S1	Shut-in	14-20-603-247A	SE	NE	24	41S	24E	1980FNL	0660FEL
RATHERFORD UNIT	17W12	430371572601S1	Active	14-20-603-353	SW	NW	17	41S	24E	1980FNL	510FWL
RATHERFORD UNIT	17W14	430371572700S1	Active	14-20-603-353	SW	SW	17	41S	24E	0610FSL	0510FWL
RATHERFORD UNIT	17W21	430371641601S1	Active	14-20-603-353	NE	NW	17	41S	24E	0510FNL	1830FWL
RATHERFORD UNIT	17W23	430371572801S1	Active	14-20-603-353	NE	SW	17	41S	24E	1880FSL	1980FWL
RATHERFORD UNIT	17W32	430371572900S1	TA'd	14-20-603-353	SW	NE	17	41S	24E	1830FNL	2030FEL
RATHERFORD UNIT	17W34	430371573000S1	Active	14-20-603-353	SW	SE	17	41S	24E	0560FSL	1880FEL
RATHERFORD UNIT	17W41	430371573100S1	Shut-in	14-20-603-353	NE	NE	17	41S	24E	0610FNL	0510FEL
RATHERFORD UNIT	17W43	430371641701S1	Active	14-20-603-353	NE	SE	17	41S	24E	1980FSL	0660FEL
RATHERFORD UNIT	18-43B	430373171801S1	Active	14-20-603-353	NE	SE	18	41S	24E	2023FSL	0651FEL
RATHERFORD UNIT	18W12	430373115301S1	Active	14-20-603-353	SW	NW	18	41S	24E	1980FNL	560FWL
RATHERFORD UNIT	18W14	430371573501S1	Active	14-20-603-353	SW	SW	18	41S	24E	0810FSL	0600FWL
RATHERFORD UNIT	18W21	430371641801S1	Active	14-20-603-353	NE	NW	18	41S	24E	660FNL	1882FWL
RATHERFORD UNIT	18W23	430373024400S1	Shut-in	14-20-603-353	NE	SW	18	41S	24E	2385FSL	2040FWL
RATHERFORD UNIT	18W32	430371573601S1	Active	14-20-603-353	SW	NE	18	41S	24E	2140FNL	1830FEL
RATHERFORD UNIT	18W34	430371573701S1	Active	14-20-603-353	SW	SE	18	41S	24E	780FSL	1860FEL
RATHERFORD UNIT	18W41	430371573800S1	TA'd	14-20-603-353	NE	NE	18	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	19-12	430371573901S1	Active	14-20-603-353	SW	NW	19	41S	24E	1980FNL	0600FWL
RATHERFORD UNIT	19-32	430371574301S1	Active	14-20-603-353	SW	NE	19	41S	24E	2717FNL	2802FEL
RATHERFORD UNIT	19-34	430371574401S1	Active	14-20-603-353	SW	SE	19	41S	24E	0660FSL	1980FEL
RATHERFORD UNIT	19W21	430371574100S1	Shut-in	14-20-603-353	NE	NW	19	41S	24E	0660FNL	1860FWL
RATHERFORD UNIT	19W23	430371574200S1	Shut-in	14-20-603-353	NE	SW	19	41S	24E	2080FSL	1860FWL
RATHERFORD UNIT	19W43	430371642000S1	Shut-in	14-20-603-353	NE	SE	19	41S	24E	1980FSL	0760FEL
RATHERFORD UNIT	20-12	430371574601S1	Active	14-20-603-353	SW	NW	20	41S	24E	0709FNL	0748FEL
RATHERFORD UNIT	20-14	430371574701S1	Active	14-20-603-353	SW	SW	20	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	20-32	430371574901S1	Active	14-20-603-353	SW	NE	20	41S	24E	0037FNL	0035FWL
RATHERFORD UNIT	20-34	430371575001S1	Active	14-20-603-353	SW	SE	20	41S	24E	0774FNL	0617FWL
RATHERFORD UNIT	20-67	430373159000S1	Active	14-20-603-353	NE	SW	20	41S	24E	2629FSL	1412FWL
RATHERFORD UNIT	20W21	430371642300S1	Active	14-20-603-353	NE	NW	20	41S	24E	0660FNL	1880FWL
RATHERFORD UNIT	20W23	430371574800S1	Active	14-20-603-353	NW	SW	20	41S	24E	2080FSL	2120FWL
RATHERFORD UNIT	20W41	430371575100S1	Active	14-20-603-353	NE	NE	20	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	20W43	430371642400S1	TA'd	14-20-603-353	NE	SE	20	41S	24E	2070FSL	0810FEL
RATHERFORD UNIT	16W12	430371572000S1	Active	14-20-603-355	SW	NW	16	41S	24E	1880FNL	0660FWL

GREATER ANETH FIELD UIC WELL LIST
Ratherford lease, San Juan County, Utah

Reg Lease Name	Well ID	API Num	Status	Reg Lease #	Surface Location						
					Qtr 1	Qtr 2	Sec	TN	RNG	NS Foot	EW Foot
RATHERFORD UNIT	16W14	430371572100S1	Shut-in	14-20-603-355	SW	SW	16	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	16W21	430371641400S1	Active	14-20-603-355	NE	NW	16	41S	24E	0660FNL	1880FWL
RATHERFORD UNIT	16W23	430371572201S1	Active	14-20-603-355	NE	SW	16	41S	24E	1980FSL	1980FWL
RATHERFORD UNIT	16W43	430371641501S1	Active	14-20-603-355	NE	SE	16	41S	24E	2140FSL	0820FEL
RATHERFORD UNIT	21-14	430371575301S1	Active	14-20-603-355	SW	SW	21	41S	24E	0660FSL	0460FWL
RATHERFORD UNIT	21-67	430373175301S1	Active	14-20-603-355	NE	SW	21	41S	24E	2560FSL	1325FWL
RATHERFORD UNIT	21W21	430371642501S1	Active	14-20-603-355	NE	NW	21	41S	24E	0660FNL	2030FWL
RATHERFORD UNIT	**6W14**	430371598400S1	Active	14-20-603-368	NE	SE	6	41S	24E	0660FSL	0660FWL
RATHERFORD UNIT	7W12	430371598500S1	Active	14-20-603-368	NE	SE	7	41S	24E	2140FNL	0585FWL
RATHERFORD UNIT	7W14	430371598600S1	Active	14-20-603-368	NE	SE	7	41S	24E	1065FSL	0660FWL
RATHERFORD UNIT	7W21	430371639400S1	Active	14-20-603-368	NE	NW	7	41S	24E	0710FNL	1820FWL
RATHERFORD UNIT	7W34	430371598900S1	Active	14-20-603-368	SW	SE	7	41S	24E	0710FSL	2003FEL
RATHERFORD UNIT	7W43	430371639500S1	Active	14-20-603-368	NE	SE	7	41S	24E	2110FSL	0660FEL
RATHERFORD UNIT	**8W14**	430371599200S1	Active	14-20-603-368	SW	NE	8	41S	24E	0745FSL	0575FWL
RATHERFORD UNIT	10W43	430371640300S1	TA'd	14-20-603-4037	NE	SE	10	41S	24E	1980FSL	0550FEL
RATHERFORD UNIT	29-12	430371533701S1	Active	14-20-603-407	SW	**NW**	29	41S	24E	2870FNL	1422FWL
RATHERFORD UNIT	29-32	430371533901S1	Active	14-20-603-407	SW	NE	29	41S	24E	0694FNL	0685FWL
RATHERFORD UNIT	29W21	430371643200S1	Active	14-20-603-407	NE	NW	29	41S	24E	0667FNL	2122FWL
RATHERFORD UNIT	29W41	430371643300S1	Active	14-20-603-407	NE	NE	29	41S	24E	0557FNL	0591FEL
RATHERFORD UNIT	29W43	430371643400S1	Shut-in	14-20-603-407	NE	SE	29	41S	24E	1980FSL	0660FEL
RATHERFORD UNIT	30W41	430371534300S1	Shut-in	14-20-603-407	NE	NE	30	41S	24E	0660FNL	0660FEL
RATHERFORD UNIT	28-12	430371533601S1	Active	14-20-603-409	SW	SE	28	41S	24E	2121FNL	0623FWL
RATHERFORD UNIT	28W21	430371643100S1	Shut-in	14-20-603-409	NE	NW	28	41S	24E	0660FNL	2022FWL
RATHERFORD UNIT	9W23	430371639800S1	Active	14-20-603-5046	NW	SE	9	41S	24E	1980FSL	1980FWL

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
14-20-603-247A

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
NAVAJO

7.UNIT or CA AGREEMENT NAME:
RATHERFORD

1. TYPE OF WELL
Water Injection Well

8. WELL NAME and NUMBER:
RATHERFORD 14-W-42

2. NAME OF OPERATOR:
RESOLUTE NATURAL RESOURCES

9. API NUMBER:
43037158600000

3. ADDRESS OF OPERATOR:
1700 Lincoln Street, Suite 2800 , Denver, CO, 80203 4535

PHONE NUMBER:
303 534-4600 Ext

9. FIELD and POOL or WILDCAT:
GREATER ANETH

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
1976 FNL 0653 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SENE Section: 14 Township: 41.0S Range: 23.0E Meridian: S

COUNTY:
SAN JUAN

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 10/10/2014	✓ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

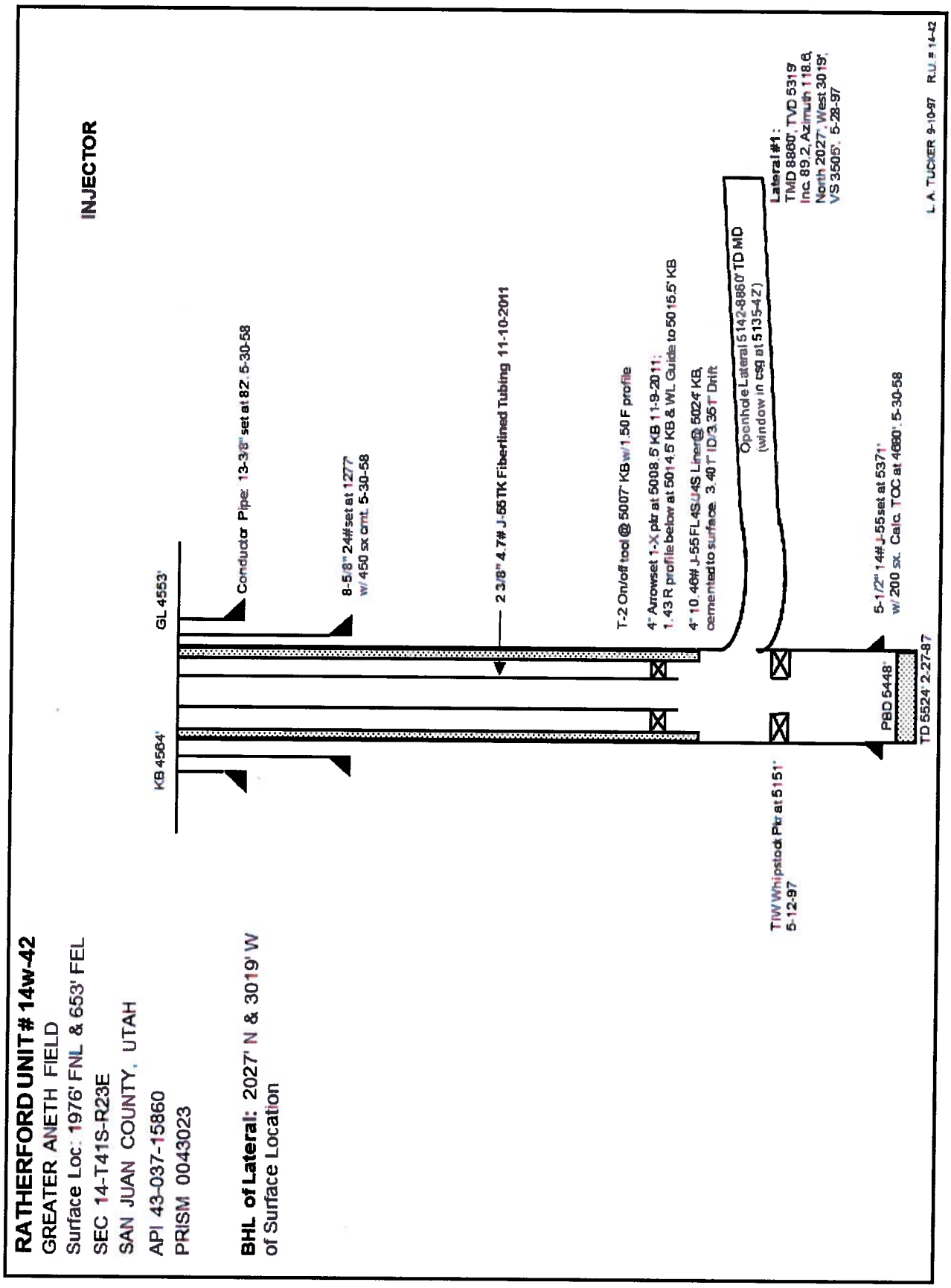
Resolute Natural resources respectfully submits this sundry as notice of acidizing the above well. Attached are the procedure and schematic

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
October 15, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Erin Joseph	303 573-4886	Sr. Regulatory Analyst

SIGNATURE	DATE
N/A	10/7/2014

RECEIVED: Oct. 07, 2014


RATHERFORD UNIT # 14w-42
GREATER ANETH FIELD
Surface Loc: 1976' FNL & 653' FEL
SEC 14-T41S-R23E
SAN JUAN COUNTY, UTAH
API 43-037-15860
PRISM 0043023
BHL of Lateral: 2027' N & 3019' W of Surface Location
INJECTOR
KB 4584'
GL 4553'
Conductor Pipe: 13-3/8" set at 82. 5-30-58
8-5/8" 24# set at 1277' w/ 450 sx cmt. 5-30-58
2 3/8" 4.7# J-55 TK Fiberlined Tubing 11-10-2011
T-2 On/off tool @ 5007' KB w/ 1.50 F profile
4" Arrowset 1-X pkr at 5008.5' KB 11-9-2011; 1.43 R profile below at 5014.5' KB & WL Guide to 5015.5' KB
4" 10.46# J-55 FL4S/U4S Liner @ 5024' KB, cemented to surface. 3.40" ID/3.35" Drift
Openhole Lateral 5142-8860' TD MD (window in csg at 5135-42')
Lateral #1: TMD 8860', TVD 5319' Inc. 89.2, Azimuth 118.6, North 2027', West 3019', VS 3505'. 5-28-97
TIW Whipstock Pkr at 5151' 5-12-97
PBD 5448'
5-1/2" 14# J-55 set at 5371' w/ 200 sx. Calc. TOC at 4680'. 5-30-58
TD 5524' 2-27-87
L.A. TUCKER 9-10-97 R.U. # 14-42

RESOLUTE
NATURAL RESOURCES

RU Injection Wells Bullhead Acid Treatments

Well Summary Table

	RU Well No.	Well Type	Current BWIPD @ TP	Current Pattern BOPD	Tbg - Csg Sizes	Tubing Run Date	Last Acid	Bbls Wtr Displ After Acid	Comment
1	12W-33	Vertical	909 @ 2910	160	2-3/8 - 4	Dec 2013	Nov 2013	30	
2	29W-32	Sgl Lateral	717 @ 3000	137	2-3/8 - 4	Jul 2013	Jun 2013	30	
3	12W-22	Tri Lateral	1045 @ 2950	129	2-3/8 - 5-1/2	Feb 1997	Feb 1997	40	
4	14W-42	Sgl Lateral	1598 @ 2950	123	2-3/8 - 4	Nov 2011	Mar 2013	30	
5	17W-14	Vertical	2402 @ 2710	104	2-7/8 - 5-1/2	Jun 2012	Oct 2006	45	
6	13W-11	Quad Lateral	892 @ 2850	101	2-7/8 - 7	Jun 2007	< 2000	45	
7	21W-14	Dual Lateral	1006 @ 2950	44	2-7/8 - 5-1/2	Jun 2003	Oct 2006	45	Tubing cmtd in csg Jul 2003.
8	19W-12	Tri Lateral	2295 @ 2610	44	2-3/8 - 5-1/2	Sept 1997	Sept 1997	45	
9	9W-23	Vertical	1461 @ 2800	32	2-3/8 - 5-1/2	Jul 1998	Aug 2007	35	
10	16W-23	Dual Lateral	1003 @ 3000	61	2-7/8 - 5-1/2	Dec 2007	Oct 2006	45	

Procedure

Horsley Witten: Not Applicable

1. Check crown valve & wing valve for integrity to ensure pump truck can rig up to well. (All wells checked by 10-2-14; New wing valves being installed at 12W-22, 14W-42 & 19W-12)
2. MIRU frac tank, manifold & hard line for flowback. RU ABC shower trailer.
3. Backflow the well for ~400 bbls or until significant gas appears, then shut in.
4. RU pumping equipment to wellhead & PT lines. Record TP, CP, Bradenhead P (BHP).
5. Pump 400 gal xylene, 2500 gal inhibited 15% HCl, produced water displacement (see table above). **Pump at maximum rate possible, staying under 3000 psi TP.** Monitor CP and BHP while pumping.
6. Rig down pumping equipment.
7. Notify Pierce Benally (435) 619-7227 that the well is ready to return to injection.
8. Open the well to injection; Record the initial injection rate and tubing pressure.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-603-247A

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO

7.UNIT or CA AGREEMENT NAME: RATHERFORD

1. TYPE OF WELL Water Injection Well

8. WELL NAME and NUMBER: RATHERFORD 14-W-42

2. NAME OF OPERATOR: RESOLUTE NATURAL RESOURCES

9. API NUMBER: 43037158600000

3. ADDRESS OF OPERATOR: 1700 Lincoln Street, Suite 2800 , Denver, CO, 80203 4535

PHONE NUMBER: 303 534-4600 Ext

9. FIELD and POOL or WILDCAT: GREATER ANETH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1976 FNL 0653 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENE Section: 14 Township: 41.0S Range: 23.0E Meridian: S

COUNTY: SAN JUAN

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☑ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☑ SUBSEQUENT REPORT Date of Work Completion: 10/30/2014	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Resolute Natural Resources submits this sundry as notice that the acid job on the above well was completed on 10/30/2014 according to previously approved procedures

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
November 24, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Erin Joseph	303 573-4886	Sr. Regulatory Analyst
SIGNATURE		**DATE**
N/A		11/24/2014

RECEIVED: Nov. 24, 2014